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Louisiana Department of Wildlife and Fisheries



2001-2002 Annual Report

OFFICE OF SECRETARY

OFFICE OF MANAGEMENT
AND FINANCE

OFFICE OF WILDLIFE

OFFICE OF FISHERIES

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2001/2002

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The charge of the Louisiana Department of Wildlife and Fisheries is to protect, conserve and replenish the natural resources, wildlife and aquatic life of the state.

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M.J. "Mike" Foster Jr. Governor

Wildlife and Fisheries Commission

Terry D. Denmon, Chairman

Lee Felterman, Vice Chairman

Bill A. Busbice

Thomas E. Kelly

Henry Mouton

Wayne Sagrera

Jerry Stone, M.D.



James Patton, Undersecretary
Phil Bowman, Assistant Secretary
John Roussel, Assistant Secretary

James H. Jenkins Jr. Secretary

Division Administrators

Bennie Fontenot, Inland Fisheries

Karen Foote, Marine Fisheries

Tommy Prickett, Wildlife

Brandt Savoie, Fur & Refuge

Col. Winton Vidrine, Enforcement



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OFFICE OF SECRETARY

The Office of Secretary is administered by the Department's chief administrative officer, who oversees all scientific operations as organized by the Office of Wildlife and the Office of Fisheries. The Secretary also has ultimate authority over the operation of the Department's fiscal and business matters as administered by the Office of Management and Finance. Support operations of the Department report directly to the Secretary. These include the Enforcement Division and the Seafood Promotion and Marketing Board, as well as the Department's Legal Section.

ENFORCEMENT DIVISION

The Enforcement Division is responsible for enforcing laws enacted by the Louisiana Legislature relative to fish and wildlife resources and boating safety regulations, as well as federal regulations pertaining to migratory birds and endangered species.

LOUISIANA SEAFOOD PROMOTION & MARKETING BOARD

The Louisiana Seafood Promotion and Marketing Board was created by the Louisiana Legislature with the purpose of enhancing the public image of commercial fishery products, promoting the consumption of these products and assisting the seafood industry. According to the mission statement, the Board assistance is to twofold: product promotion through advertising programs and public image enhancements; and market development by better utilizing existing markets and establishing new market opportunities.

ENFORCEMENT

Louisiana Department of Wildlife and Fisheries wildlife enforcement agents issued more than 17,400 citations and over 2,000 written warnings during this fiscal year for offenses including violations of Wildlife and Fisheries Commission regulations, state and federal wildlife laws and boating safety regulations. In addition, wildlife agents worked with other law enforcement agencies in the interest of public safety in the Enforcement Division's role as the state's lead search and rescue agency.

In keeping with division policy, special emphasis was placed on enforcement of deer and waterfowl regulations and all aspects of boating safety including boating under the influence (BUI) patrols on our waterways. Over 25,000 man hours were devoted to patrolling for deer hunting violations. About 24,000 hours went towards waterfowl enforcement and nearly 98,000 hours were dedicated to boating safety enforcement.

The Wildlife and Fisheries Law Enforcement Academy maintained its high standards and is Peace Officers Standards and Training (POST) Council certified. Due to the level of professionalism and preparedness offered by the academy, it is generally recognized as one of the best of its kind in the nation. Following successful completion of the Basic Training Academy, many officers are organized into special force units. Each is dedicated to a particular enforcement mission.

Boating Law Enforcement

In fiscal year 2001-02, the Enforcement Division combined traditional law enforcement with proactive boating education. Boating education classes were designed to teach safety and responsibility on the water. More than 3,200 Louisiana citizens completed 61 boater education classes taught by wildlife enforcement agents and trained volunteers. Legislation requiring mandatory boater education will be sought in the future and if enacted will induce greater participation in education courses.

Enforcement of boating regulations remained a priority and more than 10,200 boating violation citations were issued during fiscal year 2001-02. Emphasis remained on the alcohol-impaired boat operator. BUI detection continued to improve. In addition to enforcing BUI laws, wildlife enforcement agents strictly enforced careless and reckless operation statutes, concentrating on the increasing number of personal watercraft.

Search and Rescue operations saved lives and minimized human suffering in unfortunate accidents. Agents are currently working to improve communications and reduce response time arrival at areas of operation.

Training Program

Cadets receive a minimum of 25 weeks of training. The Wildlife and Fisheries Law Enforcement Academy graduated 35 new officers in 2001-2002. The training facility is located on LDWF property on Flannery Road in Baton Rouge. Classroom and lodging facilities are provided for both cadets and in-service officers returning for additional training in a much-improved learning environment.

All wildlife enforcement agents are certified in 10 courses of training conducted by experts from various agencies: standardized field sobriety testing (LDWF), chemical testing for insobriety (State Police), DWI detection (Highway Safety Division), Louisiana safe driver's course (Department of Public Safety), basic marine theft (Mississippi Parks and Wildlife), basic defensive tactics and collapsible baton techniques (LDWF), wildlife agents aquatic survival (LDWF), and Chemical Weapon Indoctrination and Certification (LDWF).

The division makes advanced training available to select officers in such areas as drug identification in the field, marine theft, boating accident investigation, and diving/underwater law enforcement.

Special Force Units

The Oyster Strike Force (established in 1990) and Salt Water Enforcement Patrol (SWEP, established in 1983) continued to successfully enforce oyster and saltwater fishing regulations. These units work with the division's three aircraft pilots and planes to monitor commercial and recreational fishing activity along Louisiana's extensive coastline. SWEP officers were also involved in several search and rescue operations.

The Special Investigative Unit is divided into two sections, covert and overt (uniformed) investigations. The unit's primary mission is detection of illegal activity in the commercial seafood industry. Illegal commercialization, underreporting and false reporting of fishery information, smuggling and violations involving interstate commerce continue to plague legal commercial fishery operations.

The Enforcement Division entered into another Joint Enforcement Agreement (JEA) with National Oceanic and Atmospheric Administrations Office for Enforcement. The 2001 agreement for \$2 million had a positive economic impact of almost \$6 million while supporting compliance with regulations designed to better manage the fishery regulations in the Gulf of Mexico and Louisiana. The JEA for 2002 was for \$1.5 million.

Members of the Wildlife Enforcement Dive Team (created in 1990) who had achieved Dive Master Certification sought more advanced training in underwater recovery operations and underwater crime scene investigations.

The State Strike Force consists of two officers from each of the nine Enforcement regions and is designed to provide

immediate, specialized additional manpower whenever and wherever needed.

Louisiana Operation Game Thief, Inc. (OGT), a program providing cash rewards to anyone reporting information resulting in the arrests of wildlife violators, recorded more than 2,000 calls to its 24-hour, toll free number. In fiscal year 2001-02, OGT paid over \$9,000 in cash rewards to individuals who reported outdoor outlaws. This anti-poaching organization celebrated its 18 year anniversary in 2002 and has now paid in excess of \$150,000 in rewards since July of 1984.

LOUISIANA SEAFOOD PROMOTION & MARKETING BOARD

The Louisiana Seafood Board was created by the 1984 Louisiana Legislature to improve the well-being of the seafood industry and to support wise management of the state's fishery resources.

Fishery resources include crabs, crawfish, inland fish, salt-water fish, oysters, and shrimp. The board services commercial fishermen, wholesalers, retailers and restaurants. The focus of the board's services is to increase consumption of Louisiana seafood via product promotion, market development, and support of seafood trade associations.

Start With the Main Ingredient®: Louisiana Seafood

During fiscal year 2001-02 the board launched a very successful branding campaign. A single slogan and one show-stopping image are now displayed at every trade show or media event, and in each advertisement produced by the Board. The slogan and the image, like a brand name, now stand for fresh, wholesome, Louisiana seafood.

The Louisiana Seafood Board was recognized by the National Fisheries Institute for Best Seafood Marketing Program in the country for the branding campaign.

Start With the Main Ingredient®: Louisiana Seafood was featured at the following:

Trade Shows

- West Coast Seafood Show, Los Angeles
- International Hotel-Restaurant Show, New York
- National Restaurant Association, Chicago
- Louisiana Restaurant Association, New Orleans
- International Boston Seafood Show

Sponsorships

- Cooking Today, WDSU-TV 6 New Orleans' Today Show

- Mrs. Lucy's Cajun Cooking and Culture, Louisiana Public Broadcasting and 12 other public television affiliates

Advertising Contracts -- a total of 65.7 million reported advertising impressions:

- *Seafood Business Magazine*
- *Louisiana Life Magazine*
- *City Business*
- *Times Picayune*, New Orleans metropolitan area (8 parishes)
- WWL Radio
- Louisiana Network Radio, statewide
- Tulane Sports Radio Network, regional
- WNOL-TV, New Orleans
- ESPN

During fiscal year 2001-02, the board also provided media services on request to editors, producers and others. The following were provided interviews, research materials, fact sheets, photographs and video: Arts & Entertainment Channel, Food Network, Discovery/Health, Washington Post, America's River (a \$150 million education center at the head of the Mississippi River), Inside Edition, Barataria Terrebonne National Estuary Program and others.

The board's education program provided study units to the WLPB-TV Educational Services, Louisiana Folklife Program, Lieutenant Governor's Learn & Serve Program, Louisiana Science Teachers Association and others. The board's interpretive installations continue to be enjoyed by thousands at the Audubon Zoological Gardens, the Terrebonne Water Life Museum in Houma, and the Marine Fisheries Museum in Lafitte. Living on the Edge, the Board's television documentary was broadcast 20 times.

OFFICE OF MANAGEMENT & FINANCE

The Office of Management and Finance is directed by the Undersecretary. This budget unit is responsible for the functions of accounting, budget forecasting and control, procurement and contract management, administrative services, information technology and services, management and program analysis (including strategic and operational planning), socioeconomic research and analysis, property control (including fleet management), boat registration, customer service program management, human resources management (including payroll), grants management, administration and issuing of licenses and permits, collection of fees, taxes, fines and penalties, public information and the Louisiana Conservationist magazine.

PUBLIC INFORMATION

The Public Information Section manages the internal and external communications activities for the Department of Wildlife and Fisheries

FISCAL

This section is responsible for all financial operations of the department.

HUMAN RESOURCES

The Personnel Section administers all aspects of an extensive human resource program for the department.

ADMINISTRATIVE SERVICES

This section assists with agency term contracts specific to Wildlife and Fisheries, seafood promotions, alligator harvest, timber sales and farm leases.

SOCIOECONOMIC

RESEARCH AND DEVELOPMENT

This section conducts and presents research regarding economic factors and customer service issues.

PROPERTY CONTROL

This section has program responsibility for the Property Control Program, Fleet Management Program and Risk Management Program.

LICENSING

This section controls the issuance of licenses and the collection of fees.

COMPUTER CENTER

This section oversees the department's information processing resources.

PUBLIC INFORMATION

The Public Information Section manages internal and external communications for the Department of Wildlife and Fisheries. These responsibilities are accomplished through four units: News and Media Relations, *Louisiana Conservationist* magazine, Information and Resource Library and Audio-Visual Productions. The section consists of eight employees responsible for the production and distribution of the department's printed materials, ongoing media relations, public resource centers and all audio-visual projects. Special promotions and events are also coordinated through the Public Information Section.

News and Media Relations

The News and Media Relations Unit manages the production and distribution of all regulation pamphlets, news articles, department newsletter and various other publications such as the department's annual report. This unit also serves as the first point of contact for media inquiries, press conferences and specialized promotional events.

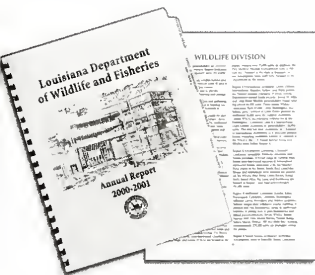
News Service

During fiscal year 2001-02 the LDWF News Service provided 331 news articles (325 news releases and six news features) to approximately 150 media outlets and 26 newsletters to approximately 1,100 fish and wildlife related businesses. News articles were distributed weekly through electronic mail and newsletters were distributed biweekly in print format. These news documents are on file in the Public Information Section main office.

The News Service holds the responsibility of producing and distributing all fishing, hunting and trapping regulation pamphlets. All pre-press work, printing approvals and final distribution arrangements are handled by the News Service. In January 2002 a new contract was created with Southwest Computer Bureau in Gonzales, LA for warehousing and mailing regulation pamphlets to Louisiana license vendors and LDWF regional offices. This new development greatly aided in getting

the publications to the vendors in a more efficient and timely manner. Requests from the general public for regulation pamphlets were fulfilled through the LDWF Library. The types of regulation pamphlets and quantities distributed included the following:

- *Louisiana Recreational Fishing Regulations 2002* (300,000)
- *2002 Commercial Fishing Regulations* (22,000)
- *Louisiana Hunting Seasons and Wildlife Management Area Regulations 2002-2003* (300,000)
- *Louisiana Migratory Game Bird Hunting Regulations 2001-2002* (217,000)



- *Louisiana Trapping Regulations 2001-2002* (10,000)
- *Louisiana Turkey Hunting Regulations 2002* (60,000).



The News Service in coordination with the Wildlife Division also arranged and facilitated the recordings of the statewide public meetings for the 2002-03 hunting seasons. These meetings took place in Ruston, Alexandria, Lake Charles, Opelousas, Covington, Bogalusa and Ferriday.

Media Relations

This unit coordinates and facilitates media contact for department personnel, including interviews, special appearances, editorial responses and specialize information campaigns. During fiscal year 2001-02 this unit initiated nine media events with statewide television and print coverage. These events consisted of organizing and executing interviews, distribution of video news releases (VNR) and talk show appearances. The following topics were covered:

- Louisiana Artificial Reef Program: Rigs-to-Reefs Lake Ponchartrain (television and print coverage)
- Maurepas Swamp Wildlife Management Area (interviews, talk show appearances and VNR)
- Rehabilitated Swallow-tail Kite Release (local television coverage)
- Black Bear Relocation (statewide print coverage and VNR)
- Hunter Orange Safety Program (statewide print coverage and VNR)
- Freshwater Jellyfish in Louisiana's Inland Waters (local television interview)
- Coastal Erosion at Rockefeller Refuge (interviews and local television coverage)
- Booker Fowler Hatchery (statewide television and print coverage and VNR)
- Boating Safety Program (statewide interviews, television and print coverage, and VNR)
- Atchafalaya Basin Florida Bass Restocking (local television and print coverage)

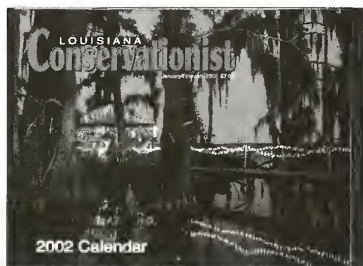
Louisiana Conservationist Magazine

The *Louisiana Conservationist* magazine produced six regular issues including the 2002 calendar. The 2001 *Louisiana Conservationist Calendar* received third place recognition from the Association of Conservation Information in a national competition among other state and federal fish and game agencies.

The *Louisiana Conservationist* magazine continues to promote

its status as the state's oldest outdoor magazine with its first publication in 1923. The 36-page, full-color magazine is primarily subscriber-funded with additional revenue from the sales of LDWF maps, posters, books and other department developed publications. The magazine's circulation fluctuated between 26,000 and 27,000 during the past fiscal year.

Three brochures were produced under the supervision of the *Louisiana Conservationist* staff. The *Louisiana Wildlife and Fisheries Foundation* brochure was redesigned by the magazine staff at the request of the Foundation and LDWF. A full color,



glossy edition was produced and 1,000 copies were distributed. The second brochure produced under the supervision of the magazine unit was the *Boater's Guide to Marine Sewage Disposal in Louisiana* with 10,000 copies printed. This brochure was sponsored by the Clean Vessel Act Program through the Sport Fish Restoration Program.

The last brochure was *Poaching is a Crime and YOU are the Victim*. Louisiana Operation Game Thief sponsored the brochure and 5,000 copies were printed.

Audio/Visual Productions

The Audio/Visual Unit is responsible for the department's audio and video productions. The A/V unit completed its mission to update equipment and catalog existing footage. A digital catalog was created using FileMaker Pro which allows computerized access to all footage by subject or date.

Five video news releases were created this year through the A/V unit and distributed statewide to 15 major television stations. The topics covered in the VNRs included the following:

- Maurepas Swamp Wildlife Management Area
- Black Bear Relocation in Louisiana
- Hunter Orange Safety Program
- Booker Fowler Hatchery
- Boating Safety Program

The A/V unit is also responsible for officially recording the monthly Wildlife and Fisheries Commission meetings. These recordings can be obtained through the Office of Wildlife.

Information and Resource Library

The Information and Resource Library is open for public access during normal work hours. Available materials include various natural resource related publications, *Louisiana Conservationist*, wildlife management area maps, historic books and documents,

regulation pamphlets and a selection of VHS videos available for loan.

The total number of information requests received was 8,813. The breakdown by source was as follows:

● Walk-ins	6713
● E-mail	1124
● Phone	689
● U.S. Mail	287

Receptionist Desk

A new responsibility was added to the library during this fiscal year which included the management and maintenance of the headquarters front lobby receptionist desk. This responsibility was added in Nov. 2001 and included handling all phone and walk-in inquiries. The total number of inquiries between Nov. 2001 and June 30, 2002 was 9,583 (7,437 phone; 2146 walk-in).

Special Promotions/Activities

The Public Information Section is responsible for organizing and executing public relations events for the department. These events are the responsibility of all four units with each contributing their expertise.

- Louisiana's National Hunting and Fishing Day Celebration/Baton Rouge - Sept. 22, 2001. This event is sponsored by LDWF in four locations across the state. The Public Information Section is responsible for organizing and executing the Baton Rouge celebration. This annual event offers a full day of outdoor activities for the public, free of charge. This was the 17th year for Baton Rouge and attracted more than 2,500 attendees.
- Atchafalaya Basin Florida Bass Restocking Press Conference - The Louisiana Wildlife and Fisheries Foundation and the Louisiana Department of Natural Resources held a joint press conference to kick-off the Atchafalaya Basin fish stocking. The conference was held at LDWF headquarters and covered by four southeast television stations and two major newspapers.



FISCAL

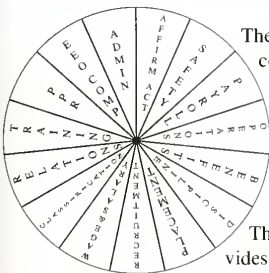
The Fiscal Section is staffed by 13 employees, and is responsible for all financial operations of the department, including budget development, expenditure reporting and monitoring, accounts payable, travel reimbursement, revenue collection and reporting, contract management, financial reporting, federal warrants and reporting, civil penalty assessments, and severance and royalty audits. This section also directs the department's strategic planning and performance measurement activities and manages all telecommunications needs including local lines and cellular/paging services.

During fiscal year 2001-02, the Fiscal Section:

- Coordinated and conducted two days of in-service training for 150 statewide staff in the areas of customer service and e-mail use, as well as procedural requirements for purchasing, accounts payable, property management, and human resources;
- Developed and implemented procedures for payment processing relative to a new VISA purchasing card program *;
- Coordinated development of a Record Retention Plan for all Management and Finance Sections;
- Advanced staff development through courses for job performance improvement and field trips to department facilities.
- Compiled a database on the department's more than 600 statewide telephone lines to assist with bill payment and cost monitoring;
- Processed monthly gas/water/electricity payments to 44 companies for services at about 60 sites statewide;
- Improved revenue collection efficiency in the areas of Deer Management Assistance Program fees, oyster tags, rights-of-way and servitudes, and Becoming An Outdoor Woman registrations; and
- Processed approximately 20,000 vendor and employee reimbursement checks.

* Use of the card from February through June resulted in almost 700 hundred statements to be examined and expensed to appropriate units for a total dollar value of just over \$211,000.

HUMAN RESOURCES



The Human Resource Section is composed of nine staff members: a director, assistant director, two Employee Administration Managers, four Employee Administration Analysts and a Safety/Training Manager.

The Human Resource Section provides extensive services to the

Department of Wildlife and Fisheries (LDWF) employees in the following programs.

- Human Resource Administration (policies and procedures, civil service rules, layoffs)
- EEO Compliance (ADA)
- Performance Appraisal
- Training and Staff Development (CPTP, MST, agency sponsored training)
- Employee Relations (employee counseling, Employee Assistance Program, grievances, drug testing, Employee Recognition Program)
- Classification (position descriptions, job studies, audits)
- Wage and Salary Administration
- Recruitment Program
- Selection and Placement (interviews)
- Discipline
- Benefits Program (health, life and miscellaneous insurance, retirement, worker's compensation, leave management, unemployment, and FMLA)
- Operations (employee files, personnel actions, enrollment and exiting of employees)
- Payroll Administration (ISIS system)
- Safety
- Affirmative Action

The Human Resource staff assistance goes beyond just LDWF employees, they assist the dependents of the employees, retirees, as well as former employees and the public. The Human Resource community throughout the state, work together for the well being of the state employees under the concept of "one employer".

Fiscal year 2001-02 the Human Resource staff continued to deal with the changes and updating of the statewide Human Resource system, ISIS/HR. The delegation and decentralization from Civil Service continues and greater emphasis on decision making and greater responsibility for accuracy of records is placed on the Human Resource staff.

LDWF continues to pass the yearly Office of Risk Management Safety Audit with the positive financial impact to the agency.

ADMINISTRATIVE SERVICES

The Administrative Services section consists of Purchasing and General Services, whose mission is to provide support services for the Department of Wildlife and Fisheries so that its mission of conservation of renewable natural resources is accomplished.

The administrative staff works closely with and supports other divisions. More specifically, they assist with agency term contracts specific to Wildlife and Fisheries, seafood promotions, alligator harvest, timber sales, and farm leases.

Purchasing

The Purchasing Section consists of three purchasing professionals. This fiscal year we managed 88 contracts, 14,800 other types of purchases, in addition to 30 leases that were maintained,

initiated or updated. Purchasing insures compliance with all state and department laws and regulations concerning procurement. Purchasing trains and serves as the help desk for all divisions in the statewide computerized system called ISIS. The purchasing part of ISIS is called AGPS. Statewide training was conducted at the Baton Rouge headquarters office and at the Booker Fowler fish hatchery in Forest Hill, LA. The purchasing process was improved by implementing a purchasing card program that has made it easier for Wildlife and Fisheries personnel to make purchases timely. It has saved time by reducing the number of purchase orders having to be entered into the AGPS system and has eliminated some usage of petty cash. It has also saved employee time in dealing with vendors in the payment process.

General Services

General Services, consisting of one permanent employee and two students, also supports all divisions of Wildlife and Fisheries by operating the mail system, receiving all deliveries and shipping all packages for the Baton Rouge office. Over 300,000 pieces of mail were processed this fiscal year. They are also responsible for duplicating and binding large numbers of documents as required by the divisions. Nearly two million copies were produced on the duplicating machine. General Services maintains the supply room. It is utilized for routine office supplies, envelopes, and paper to be distributed to the Baton Rouge office, district offices, and remote facilities.

SOCIOECONOMIC RESEARCH AND DEVELOPMENT

The Socioeconomic Research and Development Section was established in 1992 within the Office of Management and Finance of the Louisiana Department of Wildlife and Fisheries. The duties and responsibilities of the section are:

- To recommend, conduct, and coordinate economic research studies pertaining to wildlife and fisheries resources of Louisiana and the Gulf Region
- To present research findings at appropriate professional and scientific meetings and publish results in departmental publications and peer-reviewed scientific journals
- To provide information and support to other sections and divisions within the department, as well as agencies outside the department, to assist them in accomplishing their research needs, management tasks, and short and long-term objectives
- To represent the department and state in various study groups, on task forces, and on committees established to study, manage, and improve wildlife and fisheries resources at the local, state, regional and national levels
- To administer and implement special programs
- To perform other activities as directed by LDWF's appointed authorities.

Publications, reports, and presentations completed during fiscal year 2001-02 include:

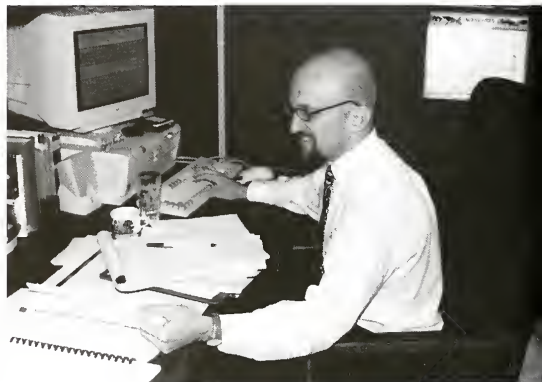
Publications and Reports

Boater's Guide to Marine Sewage Disposal in Louisiana, November 2001.

"How 'Bout Them Oysters?" *Louisiana Conservationist*, November/December 2001, p. 25.

The Participation of the Louisiana Department of Wildlife and Fisheries in the Activities of the Louisiana Geographic Information Systems Council (LGISC) July 2001 - February 2002. Baton Rouge, March 2002.

Testing For Randomness in Selecting Employees for Drug Testing in the Louisiana Department of Wildlife and Fisheries, May 2002.



Presentations

"Civil Restitution Values and Methods Currently in Use by State Natural Resource Agencies." Poster presented at the 131st Annual Meeting of the American Fisheries Society, Phoenix, AZ, August 19-23, 2001.

"Economic Contributions of Louisiana's Commercial and Recreational Fisheries." Local Coastal Programs 2001 Conference, Lafayette, LA, October 24, 2001.

"An Economic Cross-sectional Analysis of the Louisiana Charter Boat Industry." Joint Meeting of the Mississippi and Louisiana Chapters of the American Fisheries Society. Biloxi, MS, February 2-6, 2002.

"The Uses and Values of Louisiana's Oyster Reefs as Recreational Fishing Grounds" National Shellfisheries Association Annual Meeting, Mystic, Connecticut, April 14 - 18, 2002.

"Consumer Surplus of Recreational Angling over Oyster Reefs in Louisiana." American Water Resources Association Annual Meeting, New Orleans, LA, May 13, 2002.

"Preliminary Results of the Charter Boat Logbook Program Conducted by the Louisiana Department of Wildlife and Fisheries." Larose, Louisiana, May 21, 2002; New Orleans, Louisiana, May 28, 2002.

"Economic Considerations Regarding Invasive Species." Executive Briefing on Invasive Species and Louisiana, Baton Rouge, LA, May 29, 2002.

"Trends in Louisiana and Gulf of Mexico Oyster Harvesting and Processing." Terrebonne Parish Oyster Processors. Bourg, LA, June 25, 2002.

Representation on Task Forces, Study Groups, and Committees

During fiscal year 2001-02, staff members of the Socioeconomic Research and Development Section represented LDWF on the following task forces, study groups, and committees:

- Socioeconomic Panel of the Gulf of Mexico Fisheries Management Council
- Louisiana Seafood Industry Advisory Board
- Louisiana Blue Crab Task Force
- Louisiana Geographic Information Systems Council
- Gulf States Marine Fisheries Commission FIN Social/Economic Work Group
- American Fisheries Society Socioeconomic Section Committee on Revising AFS Special Publication #24 (Investigation and Valuation of Fish Kills)

Special Programs

Special programs administered by the section during fiscal year 2001-02 included the Clean Vessel Program, Customer Service Program, the Fishermen's Logbook Program, and the Louisiana Oyster Shell Recovery Pilot Project. A description of each program and a list of accomplishments for fiscal year 2001-02 are presented below.

Clean Vessel Program

The Clean Vessel Program provides funds to owners of recreational boating facilities for construction and renovation of boat sewage disposal facilities. The purpose of this program is to reduce overboard discharge of raw boat sewage in Louisiana's waters by providing boaters with a safe and convenient method to dispose of boat sewage. Under the program, recreational boating facility owners are reimbursed up to 75 percent of the costs of approved activities. Funds are also used to develop and distribute educational and informational materials to encourage boaters to use these facilities and promote environmentally responsible behavior.

Accomplishments include the completion of three boat sewage disposal facilities, the initiation of two new boat sewage disposal facilities, and the distribution of numerous promotional and educational items.

The three boat sewage disposal facilities completed during fiscal year 2001-02 included:

- Mariner's Village Marina, located on Lake Pontchartrain, Mandeville, St. Tammany Parish;
- Downtown Marina, located at the intersection of Bayou Terrebonne and the Gulf Intracoastal Waterway, Terrebonne Parish;

- Plum Orchard Park, located on the west bank of Lake Bistineau, Webster Parish.

New boat sewage disposal facility projects begun during fiscal year 2001-02 include:

- Marina Beau Chene, located on the Tchefuncte River near Mandeville, St. Tammany Parish;
- Forsythe Boat Dock (City of Monroe), located on the Ouachita River, Monroe, Ouachita Parish.



Customer Service Program

The Louisiana Department of Wildlife and Fisheries' statewide Customer Service Program was established in 1999 to ensure the delivery of effective, efficient, and responsive customer service to Louisiana residents, users of resources managed by the department, and departmental employees.

Customer Service Program accomplishments for fiscal year 2001-02 include:

- Ongoing upkeep of a customer service comment database and tracking system via the customer service channels
- Development and execution of a customer service-related survey at the 2001 National Hunting and Fishing Day event held in Monroe, LA
- Development of a survey of department employees to discern their perceptions of the Human Resources Section
- Development of the third annual Customer Service Assessment Report
- Development of the fourth annual Customer Service and Employee Action Plan
- Development and distribution of an internal subject-indexed telephone list, including parish contacts for enforcement, wildlife, inland fisheries, and marine fisheries
- Development of a subject-indexed telephone list for use

by the public placed on the Department's Internet contacts page

- Development and implementation of a 40-minute customer service presentation at LDWF new employee orientation to include the video "Quality Service in the Public Sector" (The presentation was viewed by 109 employees in fiscal year 2001-02)
- Assisted in the installation of an improved telephone system at the Louisiana Department of Wildlife and Fisheries office in Monroe, LA
- Development and implementation of a presentation on telephone skills to LDWF employees, including the video "Basic Telephone Skills 2.0" (The presentation was viewed by 186 employees at seven meetings in Baton Rouge, Monroe, and the Booker Fowler Center)
- Development and implementation of a three-hour work shop for employees entitled "E-Mail Errors" (The presentation attracted 16 employees)

Fishermen's Logbook Program

The Fishermen's Logbook Program is funded by a National Marine Fisheries grant (NA76FK0429). The program is designed to track commercial fishing patterns in relation to environmental perturbations in Louisiana and Gulf waters. Business investment and trip related costs associated with shrimp and charter boat operations were collected for the years 1999-2001. Fishermen's Logbook Program accomplishments include:

- The recruitment of a total of 64 participants into the logbook program;
- Establishment, maintenance and compilation of a computer logbook database;
- Collection and tabulation of logbook information for 1,577 charter and 351 shrimping trips;
- Development of a survey to collect information on costs of operation for the commercial shrimp fishing fleet;
- The writing of a draft report on the charter boat operation information;
- Development of the initial statistical analysis framework for the shrimp vessel data.

Louisiana Oyster Shell Recovery Pilot Project

The Louisiana Department of Wildlife and Fisheries is designing a project to coordinate the collection of oyster shells from processors and other users for use as reef-building material to enhance the state's public oyster beds. This project, supported by a National Oceanographic and Atmospheric Administration's National Marine Fisheries Service grant (NA96FK0188), consists of two main efforts:

- Estimation of the value of Louisiana's oyster reefs as recreational fishing grounds. A telephone survey of residential recreational anglers was designed and implemented in 2001. Results of this survey were calculated in 2002 and presented publicly in Mystic, Connecticut and New Orleans, Louisiana. A report of these findings is in preparation.
- Design of a pilot program to collect oyster shells from

processors for deposition on public oyster reefs. An analysis of National Marine Fisheries Service data revealed that only a fraction of the oysters harvested from Louisiana waters are processed within the state. Processing is concentrated in three parishes. Louisiana Department of Wildlife and Fisheries employees will meet with several processors and local government officials to assess their possible contributions to an oyster shell recovery program.

PROPERTY CONTROL

The Property Control Section has program responsibility for the Property Control Program, Fleet Management Program, and Risk Management Program.

Property Control

The Property Control Program has the responsibility to record, maintain and certify all acquisitions, adjustments and dispositions of tagged moveable property to the state master listing, and ensure that each transaction is done in accordance with State law, policy, rules and regulations.

The moveable property inventory consists of 8,165 items with a total acquisition cost of 41,855,527 million dollars. Annually, the program is responsible for conducting a complete physical inventory of all moveable property at the various 88 locations throughout the state.

Fleet Management Program

The Fleet Management Program records, approves and processes requests for personal assignment or home storage, daily vehicle usage, maintenance, titles, registrations and license plates for the department's 572 vehicles. Approximately 90 new vehicles are received and distributed each fiscal year.

The Fleet Management Program also manages and maintains a motor pool of 13 vehicles assigned to the Baton Rouge facility location.

Risk Management Program

The Risk Management Program was responsible for filing approximately \$106,000 worth of vehicle and property insurance claims with the Office of Risk Management during the past fiscal year.

Driver's authorization for the department's approximate 800 employees is also a responsibility of the Risk Management Program.

LICENSING

The licensing division was successful in implementing procedures to improve turnaround time on processing applications received by mail. We improved service to our commercial fishing customers by making commercial fishing licenses avail-

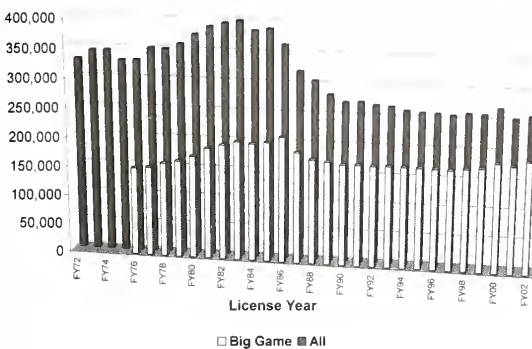


able at the Bourg Office for 3 days during December and again in April. License sales and revenue collected are as follows:

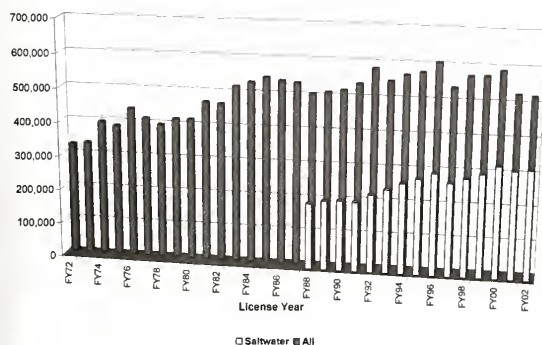
- 1.7 million recreational hunting and fishing licenses generated \$20 million in revenue
- 91,350 commercial licenses sold, generating \$4 million in revenue
- In excess of 147 thousand boat registration transactions were processed which generated \$3.3 million.

Licensing staff attended the POS Automated Licensing Symposium (PALS) Conference and the Conservation Business Managers Association Conference.

Number of Resident Licensed Hunters



Number of Resident Licensed Anglers



COMPUTER CENTER

Mission Statement

- To enable the Department of Wildlife & Fisheries to accomplish agency wide goals and objectives.
- To install and maintain servers, printers, storage devices, personal computers and other associated devices in an efficient, dependable, and secure manner for the purpose of sharing information and services between the Department of Wildlife and Fisheries employees and associated parties.
- To provide and maintain a network infrastructure of cables, fiber, and connectors for the purpose of providing a dependable medium for the transfer of data and services.
- To recommend to users personal computers and other devices that will meet their needs, considering technology, service, purpose, and cost.
- To assist users in solving problems involving personal computers, printers, and other associated devices.
- To produce custom written applications for use by various sections of the department.

The computer center is responsible for maintaining the department's information processing resources. The center operates three mainframes and six Intel based "windows" servers. We support 475 computers in thirteen locations throughout the state, and the network infrastructure that ties them all together. We offer training, help desk support, custom programming, database services, email services, Internet access, user data backup for headquarter users, statistical analysis tools for biologist, and imaging services to name but a few!

Accomplishments from our Application Development team over the past year include: developing a new web employee portal system that hosts a number of new web based applications. Such applications include the Oyster Tag database application for use by our licensing staff, a rewrite of the Budget system, web based surveys (HIP, Media, customer satisfaction), License holder lookups, Zip Code lookups, a method to enter vehicle MV3 information. We have also implemented a new partial web based training package used by our HR staff to keep track of mandated employee training. We have also enhanced the legacy licensing applications to include changes mandated by legislative action, including changing the method of calculating boat registration fees, and switching from a paper based license to a plastic card.

In addition to standard daily PC/Network support, our technical support team has implemented a new information touch-screen kiosk for our lobby area, so that patrons can access information about the departments licenses, and access maps of the headquarters and annex building. We have also started laying the groundwork for wireless access for the HQ building that will be completed next year.

Our operations center continues to scan and archive trip ticket data, motorboat renewal data, enforcement timesheets, and employee documents (in conjunction with HR). We also have recently added three new scanning functions for check revenue, DMAP, and Shrimp Excise Tax form processing for enforcement.

OFFICE OF WILDLIFE

The Office of Wildlife consists of two divisions, the Wildlife Division and the Fur and Refuge Division.

WILDLIFE DIVISION

The Wildlife Division is responsible for the state's wildlife conservation program and gathering biological data to properly manage wildlife resources.

FUR AND REFUGE DIVISION

Active marsh management is the primary responsibility of the Fur and Refuge Division. Responsibilities of the division are divided into eight major categories: Coastal Stewardship Operations; Fur and Marsh Management; Alligator Management; Permitting and Mineral Management; Rockefeller Refuge; Habitat Conservation; Education and Maintenance.

WILDLIFE

Research and Management

A wide range of research and management work is conducted in order to maintain healthy productive populations of game and to provide recreational opportunities for citizens to enjoy these species. Staff biologists gather data on game birds and animals, largely for use in formulating hunting regulations and development of habitat management recommendations. They develop workshops for the department and other agencies' personnel training and present seminars to the public. In addition, they represent the department on state, regional, and national committees, providing wildlife input to a wide array of public agencies, NGO's and private industry. The game species programs are Upland Game, White-tailed Deer, Waterfowl, and Wild Turkey.

White-tailed Deer

During the 2001-02 deer season, 168,300 deer hunters in the state harvested 212, 200 white-tailed deer. On WMAs during managed deer hunts, there were 2,759 white-tailed deer harvested. The total hunter effort for the managed deer hunts was 38,644. The Deer Management Assistance Program (DMAP) cooperators harvested 28,405 deer. There were 1,372 hunting clubs enrolled in this program. A mild winter in 2001 reduced deer movement and impacted hunter success.

Deer harvest information was entered into a computer program for analysis and evaluation. This data was used to establish deer seasons for the 2002-03 season. Harvest data for WMAs and DMAP cooperators are summarized in Federal Aid W-55-16 Report. The Louisiana Big Game Record List was updated. January 1, 2001 marked the beginning of the fourth Big Game Recognition Program. Even though the deer harvest was down, there were several record class deer harvested during 2001. The third LA Big Game Recognition Program 1998-2000 book was produced by the Deer Program Section and is available upon request.

Disease and parasite investigations continued on both private and public lands. This work is in association with the Southeast Cooperative Wildlife Disease study in Georgia. An experimental antler regulation program was established for the 2002 season in Iberville, Pointe Coupee, and West Baton Rouge Parishes. This experimental program will be monitored for three years to determine if this type of deer program is an effective way for developing an older age class of bucks. Plans were implemented to begin sampling deer herds for Chronic Wasting Disease across the state in 2002. This is a serious disease of white-tailed deer that has created problems for several states in the west and midwest regions of this country.

Upland Game

Dove

Populations have been monitored nationwide since 1953 by a call-count survey. This survey is used by the U.S. Fish and Wildlife Service to monitor mourning dove population trends. Biologists record the number of doves heard calling for a prescribed time during the nesting season along certain roadsides.

Louisiana's dove population is monitored along 19 routes randomly located throughout the state. In May and June 2002, the breeding population index based on doves heard along the routes was 13.9. This represents a 13.0 percent decrease in doves heard from 2001.

Dove hunting regulations for Louisiana in 2001 were set at 70 days with a bag limit of 12 birds. Shooting hours remained unchanged from the year before, allowing all-day hunting, except on opening weekends of each segment when hunting was restricted to afternoons only. A survey of resident license holders indicates that approximately 51,300 Louisiana hunters harvested slightly under one million doves during the 2001-2002 hunting season.

In addition to dove fields on Wildlife Management Areas, the Department leases property from private landowners for public hunting. This land is leased for public hunting on opening day only. In 2001, three fields totaling 906 acres were leased. During the opening day hunt, 562 hunters participated, bagging 2,088 doves.

Quail

Statewide fall whistling counts were conducted on 42 randomly located routes and an additional six routes on Department WMAs and the Kisatchie National Forest. On a both a statewide and regional basis, counts were similar to last year. Inferences about population status and habitat conditions were developed based on the combined results of these two survey techniques and general observations by Department personnel during the breeding season. Data are summarized in the Federal Aid W-55-15 Annual Report.

A survey of resident license holders indicates that approximately 5,000 Louisiana hunters harvested 62,000 quail during the 2000-2001 season.

A research project to investigate response of bobwhite quail to habitat enhancement by use of selective herbicides was begun in the fall of 2001. The department contracted with the LSU School of Renewable Natural Resources to conduct this three year project.

The Louisiana Army National Guard contracted with the department to develop a comprehensive bobwhite quail management plan for Camp Beauregard. The plan was completed in March 2002.

Woodcock

A woodcock banding program was initiated in 1990 to determine sex and age ratios, site fidelity, movement patterns and harvest rates of woodcock wintering in Louisiana. From December 2001 to January 2002, 245 woodcock were banded on Sherburne WMA. Sixteen were reported recovered by hunters. Hunters on Sherburne also provided data on hunt characteristics through use of mandatory self-clearing stations. Data are summarized in the Federal Aid W-55-15 report.

The department hosted the U. S. Fish and Wildlife Service Annual Woodcock Wing Bee in 2002. Data derived from aging

and sexing about 6,000 woodcock wings were used to develop trend data on woodcock production and hunter success. These data, in combination with breeding bird surveys, are used to develop management strategies for woodcock. Although many people in Louisiana consider woodcock an underutilized species, Louisiana hunters' harvest of woodcock actually ranks among the nation's highest. A survey of resident license holders indicates that approximately 4,200 Louisiana hunters harvested 17,800 woodcock during the 2001-2002 season.

Wild Turkey

A poult production survey was initiated in 1994 to assess annual brood rearing success and monitor long-term production trends. The survey indicated a good to excellent hatch throughout much of the state. Exceptions were the south central and southeast regions where production was fair to poor. Production in south Louisiana may have been negatively impacted by heavy rainfall from Tropical Storm Allison during a critical period for nesting hens and broods.

The voluntary turkey check stations continued to produce valuable information on wild turkeys throughout Louisiana. About 15-20 percent of the wild turkey harvest is reported at the 143 check stations. This information allows the Department to determine population trends, age classes of harvested wild turkeys, weights, and other factors that assist in making management decisions. During the 2002 spring gobbler season, 1,621 wild turkeys were recorded at these check stations.

The most recent hunter harvest survey indicated 21,000 turkey hunters harvested 9,000 wild turkeys during the spring of 2001. The wild turkey population in Louisiana is estimated at about 80,000 birds.

The department is supporting and participating in two wild turkey research projects. Habitat use and ecology are being investigated on Sherburne WMA by a graduate student from the LSU School of Renewable Natural Resources with support from the department and the Louisiana Chapter of the National Wild Turkey Federation. A project to determine harvest rates of gobblers in north central Louisiana is being conducted by the Louisiana Tech University School of Forestry with support from the department and the Louisiana Chapter of the National Wild Turkey Federation.

Land Development

Land development involves both wildlife habitat enhancement and infrastructure improvement to accommodate public use of the 49 WMAs. Typical activities include road and bridge repair and construction, vegetation control, tree planting, water control structure operation, pump station operation, wildlife food plot development, and boundary maintenance. Coordination and monitoring of mineral exploration activities is also a function of the Wildlife Division on WMAs.

Forest Management

The mission of the Forest Management Program is to improve forest and wildlife habitat on WMAs through sound forest management, reforestation practices and active forest/wildlife research activities. This program also serves to demonstrate the integration of forest management and wildlife habitat man-

agement to private landowners.

Public Lands

General forest inventories were completed on 17 scheduled compartments of several WMAs. Additionally, three tracts of land were inventoried for possible acquisition. Prescription developments were initiated on 16 compartments of 13 WMAs to plan habitat work on those WMAs.

Harvest preparations, including sale layout, inventory, regeneration counts, marking, map work, and proposal preparations were completed on Buckhorn, Dewey Wills, Red River, Russell Sage, Sherburne, Spring Bayou and Three Rivers WMAs. The depressed timber market in the state resulted in limited to no bidding activity on some of these sales when offered. Timber harvests to improve wildlife habitat were conducted on Big Lake, Boeuf, Buckhorn, Dewey Wills, Ouachita, Russell Sage, Red River and Three Rivers WMAs. Additional habitat treatment was accomplished on Sherburne and Sandy Hollow WMAs through pre-commercial type harvests. No southern pine beetle infestations/outbreaks were reported on WMAs this year.

Reforestation work was continued on other department properties with concentration on Big Colewa, Boeuf and Floy McElroy WMAs. Activities included site development and preparation, seedling or seed planting, survival plot establishment, and survival checks. Approximately 1,370 acres were reforested during the 2001-02 season.

Acorn and various tree seed collections were conducted to ensure a seed and seedling source for future reforestation efforts. The annual WMA mast survey aids this effort by concentrating collection efforts where the most needed types of trees species are available. The mast survey also provides an indication of the future abundance of forest wildlife species such as squirrels.

TSI work continued on Sherburne with an attempt to control Chinese tallow tree invasion by injecting the mature seed producers along the Atchafalaya River levee and along rights-of way extending into the forest from the levee. Additional control work was accomplished in several compartments through chainsaw felling and chemical spraying of tallow trees, attempting to provide relief for native hardwood regeneration to advance and reoccupy these sites. Similar work was carried out on Sandy Hollow for Chinese tallow tree and cogon grass control.

GPS work on WMA trails, roads, lakes, compartment and area boundaries was accomplished to aid in the overall WMA management program. Our GIS program development continued with emphasis on historical data input relative to our WMA forest management activities. Development of more user friendly maps for management and eventually public use continued to be a priority of our GIS program.

Growth Monitoring Plots (GMPs) were established on Big Colewa and Little River WMAs. Plots on Grassy Lake were postponed due to the late receding flood water on the area. These permanent plots aid in monitoring habitat conditions and effects of our forest management program on the habitat components represented on the WMAs.

Private Lands

LDWF Forestry Section staff provided technical assistance through the Louisiana Forest Stewardship Program, a program of by the Louisiana Department of Agriculture and Forestry for private non-industrial landowners. The program supports a multiple use approach to forest management, with LDWF providing the wildlife management expertise. Numerous landowners were assisted in fiscal year 2001-02, with 27 plan developments and follow-ups to assist the landowners in managing their properties for wildlife benefits.

Continuing Education

The Forestry Section staff developed and presented a WMA Forest Management Training and Review Seminar for the Wildlife Division and LNHP staff. Outside wildlife professionals were also invited and participated in reviewing the WMA Forest Management Program and providing a professional critique of its progress and associated benefits to the multitude of wildlife species it serves, especially noting neotropical migratory birds.

Land Acquisition

Land acquisition for wildlife management purposes is the best way to ensure that there is sufficient quality habitat for the state's diverse wildlife resources. During fiscal year 2001-2002, two acquisitions, one transfer, and one donation were completed for a total of 42,060 acres:

- 731 acres were purchased and added to Buckhorn WMA in Tensas Parish
- 1433 acres were purchased and added to Red River WMA in Concordia Parish
- 1595 acres were transferred from State Lands and added to Dewey Wills WMA in Catahoula Parish
- 38,300 acres were donated and added to the Maurepas Swamp WMA in St. John the Baptist Parish, Ascension Parish, and St. James Parish

Region I

Region I (northwest Louisiana: Bienville, Bossier, Caddo, Claiborne, DeSoto, Red River, and Webster parishes). Habitat consists primarily of rolling, mixed pine-hardwood and pine plantation habitat bisected by the Red River system and its associated bottomland agricultural lands. Five WMAs (Bayou Pierre, Bodcau, Jackson-Bienville, Loggy Bayou and Soda Lake) are located in Region I and encompass a total of 78,124 acres.

Personnel from Region I administered and managed numerous Wildlife Division programs. Programs included bobwhite quail spring and fall surveys, annual winter eagle surveys, spring dove call routes, mast surveys, spring turkey gobbler count surveys, turkey trapping, banding and release activities, and administered the game and non-game breeder permit program. Personnel also collected white-tailed deer for general herd health and reproduction projects, CWD monitoring and also administered DMAP activities. Personnel served as technical wildlife consultants to numerous private landowners, municipalities and state and local government officials and agencies.

Region I wildlife management areas are managed to provide

diverse wildlife habitat supporting numerous game and non-game wildlife species and provide quality outdoor recreational opportunities for the public. A total of 18,203 user days were estimated for Region I WMAs. Non-game projects developed included the barn owl nesting project in association with American Electric Power / SWEPCO resulting in the first owl nesting structures being erected in the state on Bayou Pierre and Bodcau WMAs. Region I personnel continued working with the Jackson-Bienville Wildlife Habitat Program which provided more than \$25,000 of non-department revenue for the development of bobwhite quail, turkey and red-cockaded woodpecker habitat on Jackson-Bienville WMA. Funds were also provided to promote hunter safety and wildlife management education. Personnel also completed the WRP wetlands restoration project on Bayou Pierre WMA and developed 20 acres of turkey brood habitat on Loggy Bayou WMA.



Region II

Region II (northeast Louisiana: East Carroll, Jackson, Lincoln, Morehouse, Ouachita, Richland, Union, and West Carroll parishes). Habitat types consist of rolling, mixed pine-hardwood forest, agricultural lands and Mississippi River bottom-land forests. The Bacon Macon, Big Colewa Bayou, Floy Ward McElroy, Ouachita, Plum Creek, Russell Sage and Union Wildlife Management Areas are located within the region.

Region II biologists conducted a wide range of activities including research and surveys, providing technical assistance to landowners relative to habitat management and wildlife populations, interacting with various universities as well as parish, state and federal agencies in reference to projects of mutual concern, conducting the alligator management program at the region level, and numerous additional projects.

Region II wildlife management areas were managed to provide habitat and population management for deer, turkeys, squirrels, waterfowl, rabbits, doves, non-game birds, furbearers and other species. Recreational opportunities were provided to thousands of hunters, fishers, campers, sightseers and other public users. Recreational user days recorded for Region 2 wildlife management areas totaled 56,722. Either sex gun hunts for deer attracted 4,724 hunters resulting in a harvest of 525 deer.

Additional opportunity for bucks only gun hunting, muzzleloader, archery and youth only hunting yielded a harvest of almost 300 additional deer. Dove hunters on the Big Colewa Wildlife Management Area bagged an average in excess of ten birds per hunter. Turkey hunting was provided on Bayou Macon, Plum Creek and Union Wildlife Management Areas. Ouachita and Russell Sage Wildlife Management Areas provided quality waterfowl hunting for several thousand persons including some who traveled from Missouri, Arkansas, Illinois, Alabama and other states.

Wildlife management area personnel performed a variety of development and maintenance functions such as boundary marking, road maintenance, water control structure operation, beaver and other nuisance animal control, farm contract supervision, equipment maintenance, public user data collection, vegetation control, food plot planting, reforestation, and conducting managed hunts. Major improvements were made to three miles of ATV trails on Russell Sage Wildlife Management Area. Development work was initiated on the Floy McElroy Wildlife Management Area which will be used for youth hunting and wildlife educational activities. Almost two miles of road were constructed and graveled, one parking lot created, and a wildlife observation platform was built. A waterfowl impoundment project was completed on Ouachita Wildlife Management Area with primary funding provided by Ducks Unlimited. This 455 acre site was planted fifteen years ago by department personnel with oaks and other hardwood seedlings.

Region III

A variety of special projects were implemented or completed on Region Three WMAs in 2001/02. On Dewey Wills WMA restoration work was started on a waterfowl impoundment levee. Floodwaters had caused considerable damage a number of years ago and repair for funding had not been available. The levee was rebuilt to the original grade. In addition a new control structure was installed. After preliminary evaluations it was determined that additional levee work will be necessary to increase the pool size of the impoundment. That work has been scheduled for the fiscal year 2002-03. In addition, an agreement with Ducks Unlimited has been reached that will result in that organization funding construction of a well and flap gate culvert. These improvements will allow flooding of the impoundment on a scheduled basis as opposed to relying on rainfall. A second special project implemented on Dewey Wills WMA was a pilot Youth Only lottery deer hunt. This hunt will differ from regular youth hunts in several ways. It will be a limited lottery and the hunt area will be reserved only for these special hunts. Also, box stands will be provided for the participants. Food plots were established and construction of stands started. The first hunt is scheduled for the 2002 season.

Two major construction projects were completed on Little River WMA. Approximately one mile of new road was built that greatly improves access to the northern end of the area. The road also serves a boundary between the leased and State owned sections of the WMA and as a firebreak for controlled burning operations. The second project involved ATV trail improvement. A special Recreational Trail grant was obtained for the project. Existing trails were upgraded and two new

parking areas were constructed. In addition construction of an equipment shed was started.

Routine maintenance activities on the State owned areas included road grading, culvert replacement, spot repairs, drainage improvements, and beaver control. On all WMAs boundary work, sign replacement, self-clearing station maintenance, vegetation control, equipment and facility upkeep were performed. In addition WMA personnel conducted user interviews and operated weigh stations. Wildlife foodplots were planted on Camp Beauregard, Sabine and Elbow Slough. Most WMAs have a number of wood duck boxes that require annual maintenance. Also, Region III procured wood duck boxes for statewide distribution.

Region IV

Region IV (east central Louisiana: Caldwell, Catahoula, Concordia, Franklin, Madison, and Tensas parishes). Habitat consists of diverse habitats, ranging from mixed pine-hardwood uplands to bottomland hardwood forests associated with the alluvial flood plains of the Boeuf, Black, Red, Ouachita, Tensas and Mississippi river systems. Six WMAs (Red River, Three Rivers, Boeuf, Sicily Island Hills, Big Lake, and Buckhorn) are located in Region 4 for a total of approximately 151,544 acres.

Region personnel administered a variety of Wildlife Division activities. These include environmental assessments, technical assistance, research, planning, development/management, alligator and nuisance animal programs. Technical advice is provided to the public and Federal, State and local agencies. The Louisiana Black Bear Repatriation project was ongoing during this time and a female bear and 3 cubs were released on Red River WMA in a cooperative effort with US Fish and Wildlife and Black Bear Committee and Louisiana State University.

Region Wildlife WMAs were managed for a variety of Fish and Wildlife species and to provide outdoor recreational opportunity. These areas are readily accessible and are very popular with the public. Public hunts are provided along with many types of non-consumptive opportunities. A total of 95,948 user days were estimated for Region 4 WMAs. Managed deer hunts, during this period, on Region 4 WMAs resulted in 8,736 hunters harvesting 726 deer. Also, a bucks-only hunt recorded 4,351 hunters were checked and killed 348 deer.

Many development, operation and maintenance projects involved: completion of four (4) shallow water areas and one (1) lake improvement totaling 1,914 acres, constructed eight (8) ATV Trails (LA Recreational Trail Grants), traversing 19.6 miles; improved three (3) boat ramps and parking facilities; initiated self-clearing permit system and increased the acreage on several WMAs through land acquisition.

Region V

Region V (southwest Louisiana: Acadia, Allen, Beauregard, Calcasieu, Cameron, Evangeline, Jefferson Davis, Vermilion and Vernon parishes). Habitat ranges from extensive coastal marshes, to prairies and vast agricultural areas, to hardwood bottoms, to rolling hills of pine plantations and mixed pine-hardwoods. Seven WMAs (Boise Vernon, Fort Polk, Marsh Bayou, Peason Ridge, Sabine Island, Walnut Hill and West Bay) totaling 260,000 acres are managed within the region.

Region personnel administered a variety of Wildlife Division activities. These include environmental assessments, technical assistance, research, planning, development, management, alligator and nuisance animal programs. Technical advice is provided to the public, Federal, State, National Wildlife Refuges and local agencies. Region personnel assist 250 private deer hunting clubs encompassing 450,000 acres with the Departments Deer Management program (DMAP). Special public dove hunts are held on 700 acres of land the Department leases in September, with 300+ hunters harvesting around 800 doves. Region 5 handles a large number of resident alligator hunting applications issuing over 100 licenses, 1000 tags and 50 non-resident alligator hunting license annually.

The Region Wildlife WMAs were managed for a variety of fish and wildlife species and provides outdoor recreational opportunity. These areas are readily accessible and are very popular with the public. Along with public hunting and fishing opportunities, these areas provide many types of non-consumptive activities. A total of 50,000 user days were estimated for the Region.

Managed deer hunts on the 4 largest WMAs within the Region resulted in 24,000 hunting efforts and harvesting 900 deer. Two areas offer special deer seasons for youth and handicapped hunters. Over 1800 turkey hunters harvested 75 gobblers from 3 WMAs. Special youth turkey hunting seasons were established on two areas which were great successes.

The WMAs are leased free of charge to the department for public use from private landowners (Boise Paper, Roy O. Martin, Weyerhaeuser, U.S. Army, U.S. Forest Service and the State of Louisiana). To continue these lease areas, requires Region personnel to meet and negotiate annual agreements with the landowners. The leases help the landowners properly manage their properties for wildlife and public recreation.

Region VI

Region 6 (south central Louisiana: Avoyelles, Assumption, most of Iberville, Iberia, Lafayette, Pointe Coupee, St. Landry, St. Martin, St. Mary, Terrebonne, West Baton Rouge, and portions of West Feliciana and Ascension parishes). Habitat type ranges from mixed pine-hardwoods, to backwater bottomland hardwoods interspersed with agricultural lands, and cypress-tupelo swamps, to open-water areas. There are six WMAs, comprising almost 117,285 acres (Sherburne, Thistlethwaite, Grassy Lake, Spring Bayou, Attakapas, Elm Hall, and Pomme de Terre, one federal refuge, and U.S. Army Corps of Engineers land within the region .

Region personnel administer a variety of wildlife oriented activities. Some activities are in conjunction with other state and federal agencies, to include, USFWS, USACOE, DNR, DEQ, Dept. of Agriculture and local parish entities. Region biologist worked with 217 DMAP clubs for a combined acreage in excess of 428,000 acres on which 6,646 deer were harvested. Region Wildlife Mgmt. Areas are maintained and managed for a variety of consumptive and non-consumptive activities. A total estimate in excess of 106,000 user days were logged on respective Region 6 WMAS. These areas experienced 11,895 user-days for

the managed deer hunts where 669 deer were recorded taken. Additional muzzle-loader and buck-only hunts yielded an additional take of 281 deer. Archers reported 61 deer taken. Some of the development and maintenance projects on the wma systems included: Access improvement—bridge replacement, culvert installation, improved boat launch approach and parking areas.

Habitat Manipulation---Co-partnered with Entergy Utility and National Wild Turkey Federation to establish turkey food plots on service right-of-ways. Manipulated water levels and vegetative growth to promote usage by waterfowl and shorebirds

Region VII

Region VII (southeast Louisiana: most of Ascension, East Baton Rouge, East Feliciana, Livingston, Iberville, Orleans, Jefferson, St. Helena, Tangipahoa, Washington, St. Tammany, St. Bernard, St. James, St. John, Plaquemines, St. Charles, Lafourche and portions of West Feliciana Parishes). Habitat types range from marshes and swamps to rugged loess bluff uplands. Nine wildlife management areas (Pearl River, Joyce, Manchac, Sandy Hollow, Bens Creek, Hutchinson Creek, Tunica Hills, Maurepas Swamp and Lake Ramsey) totaling 143,286 acres are managed in this Region.

These management areas are open for such public use as hunting, fishing, bird watching sight seeing, boating, hiking, horse-back riding, photography and berry picking, as well as many other outdoor recreational activities. Alligators are controlled on 4 management areas. Over 86,000 user man-days were recorded on the management areas during the fiscal year. Region personnel maintain management area boundaries, buildings, equipment, roads and trails. Managed permit hunts are conducted on several Region WMAs.

Sandy Hollow WMA is intensely managed for dove and quail. Over 18 miles of quail dog field trial courses, 6 dove fields, 15 miles of food plots, 50 millet plots and 30 miles of foot strip planting are prepared annually. Controlled burning is conducted on some 2,500 acres each year. Approximately 115 food plots were planted and monitored on other WMAs.

Region personnel were involved in the nationally reported search for the Ivory Billed Woodpecker on Pearl River WMA. Unfortunately, none were found. Boundary marking continued to be top priority on the newly acquired Maurepas Swamp WMA with some 80 miles of new boundary delineated and posted to date.

Region Biologists and Technicians worked with 240 Deer Management Assistance cooperators, maintained over 400 woodduck boxes, responded to numerous fawn and sick deer complaints and collected samples for Chronic Wasting Disease testing. Research was conducted on quail nest predation by fire ants and wild turkey gobbler mortality. Woodduck trapping operations were conducted, and data was collected from turkey check stations.

FUR & REFUGE

Habitat Conservation

The primary objective of the Habitat Section is to gather and compile data on wildlife and fisheries resources, determine the requirements for conserving the resources, and provide information and technical assistance to governmental entities, industry, and the public. Data are also gathered on the potential impacts of human activities on the resources, providing such technical information to planners and decision-makers in advance of execution of projects.

Louisiana continues to lose valuable fish and wildlife resources to development projects of federal, state and local governments and to projects of private enterprise. The Louisiana constitution charges the Department of Wildlife and Fisheries with responsibility "to protect, conserve and replenish the natural resources of the state, the wildlife of the state. More specifically, federal, state and local laws and procedures allow the department to conduct environmental investigations, i.e., the review of proposed projects and determination of possible effects on fish and wildlife resources.

Work during this fiscal year included cooperative efforts with the following proactive government and non-governmental natural resource units: Black Bear Conservation Committee, Groundwater Advisory Committee, Non-point Source Pollution Advisory Committee, Cameron/Creole Advisory Committee, Mitigation Area Review Team, Mitigation Bank Review Team, Geological Review Team, Hydrogeomorphic Modeling (HGM) Working Group, coastal restoration activities with the Governor's Office, environmental roundtables with the Vicksburg and New Orleans Army Corps of Engineers (ACOE) offices, Louisiana departments of Health and Hospitals and Department of Environmental Quality efforts related to pollution and fish contamination, and mitigation banking.

The workload of the Habitat Section is divided into four units: Environmental Investigations, the Louisiana Natural Heritage Program, the Louisiana Natural and Scenic Rivers Program, and the Nuisance Wildlife Program.

Environmental Investigators

Statewide Environmental Investigations staff members reviewed approximately 3000 state and federal permit applications this fiscal year. Permits were for projects related to alteration of wetlands, freshwater diversion, hurricane protection, navigation, marsh management, mitigation banks/areas, airport construction, Community Development Block Grants, Farmers Home Administration grants, flood control, solid waste disposal, hazardous waste disposal, hydro-power and other types of dam projects, and coastal restoration.

There are numerous government agencies that the department works with in conducting environmental investigations in cooperation and coordination with U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Most important is U.S. Army Corps of Engineers (ACOE).

ACOE is the principle agency promoting navigation and flood control projects in the state and is the permitting authority nationally for wetlands and adjacent waters. As a construction agency and a permitting agency, ACOE requires fish and wildlife resource data.

The Natural Resources Conservation Service and the U.S. Forest Service, of the United State Department of Agriculture (USDA), are required to consider the effects of their projects on fish and wildlife resources. These and other USDA agencies frequently require biological resource data during the project decision-making phase.

The Federal Highway Administration, Environmental Protection Agency, Federal Aviation Administration, Farmers Home Administration, Housing and Urban Development, as well as Louisiana Department of Transportation and Development, Louisiana Department of Natural Resources, Louisiana Department of Environmental Quality, and Louisiana Department of Culture, Recreation and Tourism also require fish and wildlife information during project planning and decision making.

The section also works with private developers and consultants involved in the permit application process with the above regulatory government bodies.

Other Statewide Functions

The Habitat Section, Nuisance Wildlife Program has been in operation for several years, but it has changed substantially. Statewide trappers are no longer available, therefore the section can only provide advice and names of permitted nuisance control operators. Nuisance Animal Control permits are issued by the Section to both qualified professionals and to private individuals who are having problems and are deemed capable of taking care of the problem on their own. The program is staffed, part-time by one biologist and is supported by funds available within the Habitat Section. No funds are specifically allocated to the program.

Louisiana Natural Heritage Program (LNHP)

After a hiatus of over a year, the Natural Heritage Program staff once again reached its full complement. Therefore, it was much better able to accomplish its mission and goals.

LNHP staff reviewed over 2000 proposed public and private projects for impacts on rare, threatened, and endangered (r/t/e) species and exemplary natural communities. During the same period, we issued scientific collecting permits, wildlife rehabilitator permits, and special purpose permits, all designed to monitor and control the removal of wildlife from their natural habitat, and to rehabilitate injured wildlife and return them to the wild, if possible.

During the year, LNHP staff spent more than 50 staff field-days conducting surveys on r/t/e species and natural communities. These surveys, along with data from other researchers, provided information for 121 new Element Occurrence Records (EORs) (representing 41 taxa) and 146 updated EORs in the computerized database used by the program.

The LNHP administered federal aid for endangered species through the Section 6 program in cooperation with the U.S. Fish and Wildlife Service. Through this program, the state is reimbursed up to 75 percent of the cost of endangered species research and management. Research conducted during fiscal year 2001-02 included studies on Louisiana black bear, inflated heelsplitter mussel, and Louisiana pearlshell mussel. Research is conducted by staff biologists and contracted to university faculty.

Staff also participated in more than five Christmas Bird Counts, and administered more than 50 Breeding Bird Surveys throughout the state. These data are used throughout the United States to determine population trends on both breeding and wintering grounds. Staff also administered the statewide Louisiana Amphibian Monitoring Program routes. Each is typically conducted three times per year. Unlike the bird surveys, these surveys are providing baseline information on the status of amphibians along the routes. The routes will be conducted by the LNHP staff and volunteers annually, and will be used to develop trend analyses for the species encountered. This was the fourth year such amphibian surveys were conducted.

The Louisiana black bear license plate, and "Teaming With Wildlife" programs were administered by the Natural Heritage Program during this year. LNHP staff worked closely with the Reptile and Amphibian Task Force by providing information on the status of species of special concern in Louisiana, and provided recommendations to the Task Force on items involving take of certain species of reptiles and amphibians from the wild. LNHP represented the department on the Black Bear Conservation Committee Executive Committee. Also, staff represented the department on conservation issues throughout the state and the US. For example, we served as members of technical and core teams developed by The Nature Conservancy to develop conservation plans for ecoregions that partially were located within this state. These included the East Gulf Coast Plain Ecoregion, the Gulf Coast Prairies and Marshes Ecoregion, etc. Such plans will identify key target sites needed for the conservation of biodiversity in the ecoregion. Implementation will be spearheaded by The Nature Conservancy. Another means of providing input into conservation issues arises from our review of the proposed projects listed earlier in this section, and review of prescriptions and management plans on Kisatchie National Forest and our own series of Wildlife Management Areas. Staff reviewed dozens of proposed conservation/management plans during the year. We also identified and conducted field investigations of special areas on most of our upland wildlife management areas. These are to become natural areas.

During the year, the Natural Heritage Program staff began planning and drafting the State Safe Harbor Program for the endangered Red-cockaded Woodpecker. It was also involved with translocations of the endangered woodpecker on National Forest lands in Louisiana, and on private lands in the Florida Parishes.

Public outreach by LNHP staff included at least two dozen presentations at educational facilities and scientific meetings. The staff also was involved with the development of some two dozen news releases from the department during the year, and several magazine and newspaper articles focused on conservation issues.

Louisiana Natural and Scenic Rivers Program

The Scenic River Coordinator participated in or initiated nine enforcement actions. These included cases of illegal dumping, illegal sewage discharge, operating on a scenic river without a permit, illegal timber harvest, and channel re-alignment. Additionally, two compliance orders and one cease and desist order were issued to insure adherence to the Scenic Rivers Act and related rules and regulations. He also, through routine surveillance, post project inspections and response to complaints, caused compliance with permit conditions, utilization of adequate sediment protection, and the clean up of project sites. Examples of mitigative measures the staff has required through the Scenic River permit process include: allowing no clearing of right-of-way above directionally bored segments of pipeline crossings of scenic rivers; requiring that water used for irrigation or thermostatic testing of pipelines undergo adequate treatment before being allowed to return to our waterways; requiring vegetated buffers be maintained between permitted projects and designated scenic rivers; greatly limiting, and at times prohibiting, the use and operation of heavy equipment within 100 feet of designated scenic rivers. The staff issued few, if any, permits for activities on scenic rivers without first making some mitigative changes to the original application and/or making some compensatory requirements of the applicant.

The Scenic River Coordinator maintained regular contact with both state and federal agencies to insure that designated scenic rivers are considered in all levels of planning and permitting. These agencies include USCOE, USDA, NRCS, FEMA, USFWS, USFS, EPA, DEP, DEQ (LA and AR), DOTD, DHH, CRT, DOA, LAF, and Office of State Lands. The coordinator also worked closely with city planners, police juries, mayors, and local interest groups and organizations throughout the state. Cooperation and corroboration has ranged from making written contributions to management plans to requiring permits for certain activities and enforcing permit conditions. The Scenic River staff made it abundantly clear that Louisiana's natural and scenic rivers are indeed treasures of this state and that they are to be given every consideration as state protected priority areas in all aspects of planning and use.

In the area of public outreach, the staff continued to use a compiled list of local and statewide conservation organizations, and user groups/contacts associated with the various Scenic Rivers in order to facilitate the exchange of information, participation and cooperation between the Program and the interested public. The staff also participated in general wetland education efforts by various public and private entities, schools, and local governing bodies.

The Coordinator continued to work with our Enforcement Division to ensure that the laws, rules and regulations of the Scenic Rivers Act are adhered to. We have reported 20 suspected violations to the Enforcement Division and followed up by assisting them in their investigation when needed. Among those violations acted on were illegal timber harvest, illegal dumping, operating on or adjacent to Scenic Rivers without a permit, and illegal construction projects. A number of citations were issued for various other violations. We have also accompanied Agents in the investigation of numerous other complaints.

The Staff denied the issuance of two permits because the proposed activities were not compatible with the requirements of the Act and their potential and/or imminent impacts were not considered acceptable. Those permits that were issued, almost invariably were issued only after mitigative and/or protective measures were incorporated into their designs to insure that the ecological integrity and scenic values of the respective Scenic Rivers were preserved. A total of 16 permit applications were received and 14 were issued during 2002.

Fur and Alligator Advisory Council

The FAAC continued to work during 2001-2002 towards its two major goals. The first goal of educating the public concerning the role of wildlife utilization in conservation cannot be separated from the second goal of market enhancement for fur and alligator skins and products. FAAC has come to the increased realization that without education of the public to counter misleading animal rights propaganda, enhancement of markets cannot be accomplished in the long-term. The educational module developed, delivered to teachers, and now available on the website, www.alligatorfur.com, has been a great success. Requests for sample skins and programs have been tremendous. The website is carrying the educational story to a much broader audience of teachers and students. In order to succeed, new ways to involve other conservation organizations and ways to inform more people while using the same number of dollars must be found.

This fiscal year FAAC continued to concentrate efforts on the U.S. alligator market. The Retailer Education Program was well received by retailers with requests for more educational programs for their sales staff. This program provides information to be distributed about the sustainable use of alligators, the "marsh to market story", and the difference between alligator and caiman leather. In many cases the education of the sales staff is very basic, such as, the differences between alligators and caiman.

FAAC also concentrated on solving problems associated with alligators, crocodilians in general, CITES and USFWS programs and regulations. Progress has been slow but steady. Funding of an economic study of the crocodilian trade has been a major step to address many problems and point out the value to species conservation of some management programs.

FAAC has struggled to find new strong and stable markets for Louisiana fur. The international fur market continues to be very dynamic and many internal and external factors affecting buying trends and markets are still present. Russia and mainland China still hold the brightest future for new and expanded markets. However, Russia is just now starting to buy again after the devaluation of the ruble in 1998 and China still knows very little about wild fur, continuing to use ranch mink and fox. FAAC has followed a marketing plan of working in several countries that are gateways to Russia with new designs that appeal to Russian retailers. See the 2001-2002 Fur and Alligator Advisory Council Annual Report for a summary of projects.

National and International Issues

Division staff continued to represent the department and the

International Association of Fish and Wildlife Agencies (IAFWA) at numerous meetings concerning the international effort to standardize trapping systems for furbearers and to monitor and develop strategies to counter animal rights activities.

Currently one staff member participates on the IAFWA Furbearer Resources Task Force. This committee represents the 50 states and Canada on various issues pertaining to furbearer management. Topics include EU fur regulation, National Trapper Education Program, Best Management Practices for Trapping, trap evaluation research, trapping outreach and other issues. Staff attended the annual meeting of the International Association of Fish and Wildlife Agencies in Wichita, Kansas December 1-5, 2001. Meetings attended included Fur Resources Technical Work Group, Shorebirds/Water birds, Fish and Wildlife Service – alligator issues, CITES, International Relations Committee.

The division continued to provide compilation of fur harvest data for the United States as requested by the IAFWA. Louisiana has served as a clearing-house for this information for the past 15 years. This U.S. harvest data was originally published in a document by the Ontario Ministry of Natural Resources and later in a 10-year wildlife status summary completed by the U.S. Forest Service. A document entitled "U.S. Fur Harvest (1970-1992) and Fur Value (1974-1992) Statistics by State and Region" was compiled for the IAFWA Fur Resources Committee in June 1994 and is updated periodically.

Monitoring Fur Harvest

Various projects were conducted to monitor annual furbearer harvest distribution and total harvest. Each year fur buyers and dealers are required to submit reports providing information on pelts purchased by species and parish of harvest. Annual audits of all fur dealers provide a record of total pelts by species shipped from Louisiana. River otter and bobcat possession tags provide data on timing and locations of all bobcat and otter harvested in the state. These tags are necessary to insure that only Louisiana otters and bobcats are tagged with federal export tags (a federal requirement for out-of-country shipment).

The 2001-2002 nutria harvest (24,683) decreased by 4,861 from the previous season total of 29,544 pelts. The average nutria pelt price paid to trappers during this past season was \$1.75, a decrease of \$.43 from the previous year (\$2.18). The total value of the nutria harvest decreased from \$64,525 to \$35,066. The eastern nutria harvest (14,300), with a price of \$1.00, was down 6,380 from the previous season and made up 58 percent of the 2001-2002 harvest. The western nutria harvest (10,383) with a price of \$2.00 was up 1,519 pelts from the previous season. The decreased income to coastal trappers is detrimental to maintaining numbers of trappers, which are essential in reducing vegetative damage to coastal wetlands.

Records available from the License Section indicate a total of 871 trapping licenses were sold during the 2001-2002 trapping season. These figures show a drop of 116 in trapping licenses sold last season when compared to the previous season. The trend of low numbers of trapping licenses sold is directly related to the continued low prices paid for major furs (nutria and raccoon).

The total of 37,580 pelts harvested (all species) was down 19,866 pelts from the previous season's total of 57,446. The total value of the 2001-2002 fur harvest to the state's trappers was estimated at \$202,611. This was down \$112,817 from the previous season. The harvests during the past four seasons are by far the lowest since records have been maintained (early 1920's). Declines in the number of trappers, harvest level and fur prices are directly related to a continuing very soft market for most wild furs, not only in Louisiana, but throughout the world.

Nutria Damage

During the 2002 survey, conducted in May and early June, a total of 21,185 acres of coastal marshes were identified as being negatively impacted by nutria feeding activity. When compared to 2001 (22,139 acres), there was a 9.6 percent decrease in the number of damaged acres in 2002. This damage was observed along transects located at 1.8 mile intervals. Due to the distance between survey lines, all areas impacted by nutria herbivory could not be identified. Although it is difficult to extrapolate or expand from these survey results to a coast wide estimate of nutria herbivory damage, it is obvious that total acres impacted remains at approximately 100,000 acres. Additionally, there were many survey miles where we observed obvious nutria herbivory activity but marsh conditions did not warrant a damage classification. These areas should, however, be closely observed during future surveys. The overwhelming bulk of the damage is located in southeastern Louisiana with only very isolated small areas of damage in southwestern Louisiana.

The most significant findings include: 1) impact of nutria herbivory in southeastern coastal marshes continues to play a major role in vegetated marsh loss, 2) the damage is rated as moderate or severe for 16 percent of the damaged acres, 3) damage identified at 39 sites containing 12,499 acres was classified as old damage and not recovering, and 4) eight of the sites surveyed converted to open water (1,050 acres) 5) damage at 72 sites containing impacted acres amounted to 16,654 acres, which may or may not become more severely impacted. Finally, one of the present concerns is the sites classified as "old not recovering" (12,499 acres) can potentially convert into open water over the course of time. These acres of "old not recovering" criteria increased by 68% from the previous year, 8,531 acres in 2001 to 12,499 in 2002.

Survey results strongly support the need for continued development of a trapping system that will facilitate significantly higher nutria harvest. The Louisiana Fur and Alligator Advisory Council and the Louisiana Department of Wildlife and Fisheries will continue with marketing projects to encourage improved prices to trappers.

This information should be helpful to local, state, and federal agencies and land companies planning marsh restoration projects and developing marsh management plans. Hopefully it will encourage and assist researchers to initiate studies to further improve understanding of the problem. It has improved the data base available to the LDWF to explain the significance of the problem and suggest potential solutions to decision makers.

In conclusion, nutria herbivory is playing a major role in the

coastal marshes of Louisiana. Direct vegetation removal contributes to permanent loss of vegetated wetlands; however, vegetative loss is not the only impact observed. Nutria are currently, and are suspected to have historically, played a major role in affecting plant species composition throughout the coast. Of great concern is that only a small fraction of damage sites have recovered since our initial surveys in 1993. Most areas identified during those initial surveys are still being impacted in 2002. These fragile wetlands may not be able to withstand this continued stress in years to come.

Nutria Meat Marketing

The Nutria Harvest and Wetland Demonstration Project was approved through the Coastal Wetlands Planning, Protection, and Restoration Act in 1997. This five year project was initiated in 1998 and has been comprised of three major components: 1) plan, develop and conduct various nutria meat marketing activities, 2) conduct a coast wide nutria herbivory survey, and 3) provide incentive payments to trappers and nutria meat processors for three seasons (1998- 99, 1999-2000, 2000-2001, 2001-2002). The budget established for this project was \$2.1 million:

\$300,000-promotion and marketing

\$300,000-coast wide nutria damage survey

\$1,500,000-incentive payments for trappers and processors.

The Department entered into a contract with Chef Philippe Parola to encourage the acceptance and use of nutria meat by high profile restaurants across south Louisiana. Chef Parola, enlisted 10 high profile restaurants in a nutria meat promotion for a period of 3 months. The promotion was consistent with our effort in Louisiana to promote nutria as a human food source and provided retail availability of nutria meat products to the public.

LDWF contracted with the Louisiana Culinary Institute to participate in the Louisiana Restaurant Association Food Show August 4-6, 2001 which featured nutria meat. In association with the LRA the department participated in the Louisiana Gold Culinary Classic 2001 which was held in New Orleans. The department sponsored the "Nutria Category" in which seven chefs from around the state participated.

The department entered in a contract with the Weill Agency of Baton Rouge to assist LDWF with the Nutria Promotion Project. The contract tasks include: provide information to the public with facts on nutria meat and nutria's impact on coastal wetlands, develop new markets, and create positive publicity for nutria meat by developing partnerships. The contract was executed in February 2002.

The department participated in retail promotions of nutria sausage at local grocery stores, sportsman's shows and other festivals in south Louisiana.

The department contracted with Chef Philippe Parola to prepare and serve various dishes during several promotional activities throughout the fiscal year 2001-02. These promotions were funded through Coastal Wetland Planning, Protection and Restoration Act (CWPPRA).

Marsh Management

Division staff conducted an aerial survey across the coast to update the status of Brown Marsh and to create a new vegetative type map. This required 10 days of helicopter flight in July and nine days in June. Another 10 days were spent with Steve Hartley, National Wetlands Research Center, USGS compiling and analyzing data to prepare a Brown Marsh Update Report and a 2001 Vegetative Marsh Type Map. A Brown Marsh Update presentation was given at a Mid Term Workshop in January 2002.

Division staff also worked with Steve Hartley, National Wetlands Research Center, USGS on a compilation of data and creation of Vegetative Marsh Type Maps of the Caernarvon Diversion Area for 1989-1995.

Division staff continued work on several CWPPRA projects during this period. Staff worked closely with NRCS to develop access routes and a borrow area for Lake Portage Project (State Wildlife Refuge). Material to be dredged from near Hell Hole will be used to back-fill a pipeline canal running from near the gulf shoreline to Vermilion Bay.

Division staff continued work on the Lake Sand Project (east end of Marsh Island Refuge) during the year. This involved construction of eight plugs in oil and gas canals on the east end of Marsh Island Refuge. A contract was awarded in July 2001 to Tacon Co. Inc., for \$3 million. Approximately 5,500 linear feet of shoreline in the vicinity of Lake Sand was protected with 53,000 tons of rock. A final inspection was completed December 2001. In addition to shoreline protection this project should restore historic hydrology to a portion of the east end of Marsh Island improving fish and wildlife habitat.

Staff also worked on two other CWPPRA projects involving coastal wildlife management areas. The Delta Wide Crevasse Project on Pass A Loutre WMA (PAL) dates back to the early 1990s. Freshwater diversions were created earlier by innovative work on the part of division staff. Working with oil and gas production companies the department created cuts in the end of location canals allowing river water to flow into adjacent bays and small deltas were quickly formed. This concept was adopted as a CWPPRA project and many other such cuts were made throughout much of the delta. Staff worked with DNR and NMFS to select which old cuts should be cleaned out and where new cuts could be made. This selection process required a number of meetings, ground surveys, and aerial flights with photography. The work should occur in 2003.

Staff also worked with DNR on the CWPPRA Small Dredge Project. Several sites on Point-Aux-Chenes (PAC) WMA and PAL WMA were considered for this project. Select of sites include aerial surveys and ground checks. One site in the Montegut Unit on PAC WMA was rejected because of the abundance of pipelines in the proposed borrow area near Wonder Lake. However, a site near the PAL WMA headquarters is likely to be constructed in 2003.

Division staff began working through the CWPPRA process on a Coastwide Nutria Control Project in early 2001. The concept of

herbivory control was considered an important strategy in all public meetings in Southeast LA to consider candidate projects for PPL 11. This project was high on the list under consideration near the end of the process in 2001. In April 2002 the CWPPRA Task Force approved funding for this project at \$2.5 million annually for five years. This project grew out of the need to address a serious wetlands loss problem. Fur trapping activity has been declining for over ten years because of weak demand and low prices. This has resulted in over population of nutria and serious damage to coastal wetlands from nutria herbivory. Aerial surveys during the mid-1990s through 2002 show 80,000 to 100,000 acres damaged by nutria. The goal of this CWPPRA project is to eliminate or significantly reduce damage to coastal wetlands resulting from nutria herbivory. The project will implement a Coastwide Nutria Control Program designed to remove up to 400,000 nutria annually. The program establishes a \$4 incentive payment per nutria tail delivered by registered participants to collection centers across the coast. Annual reports on nutria harvest distribution and results of aerial damage surveys must be provided to DNR and the CWPPRA Task Force.

During the spring and summer 2002 staff worked on program implementation including development of a budget, regulations, public meetings and RFP process to select a contractor for collection of the tails and payment to participants.

Division staff continued to work closely with Corps of Engineers on annual maintenance dredging of the Atchafalaya River through the Atchafalaya Delta Wildlife Management Area. This requires planning and review of specifications during the fall and monitoring of activities during the summer. Other work on spoil placement concerned Wine Island and the use of spoil to set back plant succession to improve habitat for terns and Black Skimmers while protecting shrub habitat for Brown Pelicans.

Staff also planned, assisted with design and specifications and inspected the construction of the Bird Island Rock Breakwater project. This project involved placement of 3,150 linear feet (25,000 tons) of rock along the eastern and western edges of Bird Island Bayou. This project serves to protect the Marsh Island Headquarters from constant wave energy, provides shoreline protection, and restores the historical bayou opening. This project was funded by LDWF through Marsh Island capital outlay funds at a cost \$834,362.

New Iberia staff in April and May 2001, working with data from the entire division, developed and submitted 18 proposals to DNR for funding through the Coastal Impact Assistance Program. These proposals by WMA/Refuge were as follows: Rockefeller Refuge-3, State Wildlife Refuge-1, Marsh Island Refuge-3, Atchafalaya Delta WMA-1, Pointe au Chenes-3, Salvador-1, and Timken-1. Three other non-construction projects submitted; one for Brown Pelican monitoring, one for eagle monitoring, one for water bird monitoring, and one for a Louisiana Coastal Workshop for educators. Five construction projects were selected for funding: 1) Campground Improvement, Atchafalaya WMA (\$140,000), 2) Oyster Lake Terracing, Marsh Island Refuge (\$206,800), 3) Lake Tom North Shoreline Stabilization, Marsh Island Refuge (\$440,000),

4) Grand Bayou Unit Boat Launch, Pointe-aux-Chenes WMA (\$550,000), Montegut Levee Repairs, Pointe-aux-Chenes WMA (\$500,000). Two monitoring projects approved included two years of eagle and pelican surveys (\$133,000). A project involving a LA Coastal Ecology Workshop for educators was funded for two years (\$74,000).

Rockefeller Wildlife Refuge

Rockefeller Wildlife Refuge is a leading innovator for coastal marsh restoration and enhancement technology, and a prime example of how intensive management can protect and enhance coastal wetlands for fish and wildlife. Rockefeller continues to stay on the cutting edge of coastal marsh issues, from the earliest marsh management activities to the latest recommendations regarding 3-D seismic activity, with the understanding that vegetation productivity holds the key to long-term health of the wetlands ecosystems.

Marsh Management, Restoration and Mineral Management

Rockefeller's staff maintains over 200 miles of levees and 40 water control structures which result in conservation of approximately 76,000 acres of refuge wetlands, and additionally enhances water management capability of 100,000 private sector acres within the Mermentau River Basin. Work includes intensive manipulation of structures to control water and salinity levels within 12 large units managed for optimum vegetation, and fish and wildlife production.

Objectives of maintenance and manipulation of the refuge's system of levees and water control structures vary somewhat by management unit, but generally goals are to maintain marsh health, provide conditions favorable for production of waterfowl food plants, and incorporate multi-species management when possible.

Habitat Enhancement/Restoration

Water level management continued to be an important regional issue as a result of heavy summer/fall rainfall across south Louisiana during fiscal year 2001-02. Rainfall amounts at Rockefeller Refuge from July to September 2001 totaled 33.3 inches, which was 52 percent above the seven year long term average for the same time period. Considerable time was spent by refuge personnel manipulating water control structures to evacuate excess water from the marsh in anticipation of the arrival of wintering waterfowl.

Five marsh projects enhanced 28,550 acres during fiscal year 2001-02. Projects included water control structure replacement, water control structure repairs, levee refurbishment, and canal erosion control.

The Unit 1, 48 inch, stop-log, flap-gate water control structure failed and was replaced to maintain water and salinity control within the unit. The canal along the east side of the unit was armored with man-sized rock at a cost of \$515,000 to stop scouring and boat traffic erosion. The 1,250 acre management unit is important for wintering waterfowl and recreational crabbing and shrimping.

The Unit 5 and Price Lake water control structures were repaired allowing continued intensive water level control of the

4,900 acre and 7,500 acre management units, respectively. These areas are extremely important to wintering waterfowl and molting mottled ducks during the summer.

Work continued raising and shaping 4.7 miles of the Unit 2 levee to enhance management capabilities within the 1,400-acre unit and for developing a nature drive. The nature drive will proceed south along a 100-acre fresh water unit and around Unit 2 and will become a popular tourist experience in southwest Louisiana.

A 3.7 mile portion of the south and east Unit 6 hurricane protection levee was raised and reshaped protecting 13,500 acres of refuge wetlands. This area is important habitat for nesting alligators and wintering waterfowl.

Approximately 18,000 feet of nearly nine miles of permitted earthen terraces as been stacked out for constructed in the north-west portion of Unit 4. Construction began in July 2002. The area is consists of large bodies of open water and is suffering severe erosion along the fringes. Plans are to construct and plant half of the remaining terraces in the spring and summer of 2003.

As a general rule, 15-35 percent of the refuge is control burned annually. Control burns were conducted in Units 5, 8, Price Lake, and the unmanaged area south of Unit 14 totaling 29,930 acres or 39.4 percent of the refuge. Burning is conducted to remove rough and litter which reduces the chance of unwanted lightning fires; sets back vegetative succession; and promotes the growth of desirable wildlife food plants.

Plug and abandonment of oil/gas wells and associated hardware are a major component of any successful mineral management program. Exxon/Mobil removed numerous flowlines and obstructions from Unit 6. Completion of these long-standing environmental action items eliminated the risk of a spill on refuge property and possible injury to airboat operators working in the area.

Work continues on a dedicated dredging project for the reclamation of 170 acres of brackish marsh. Plans are to use a hydraulic dredge to deposit fill in each of three sites ranging in size from 4.7 to 107 acres. Oyster grass will be planted on 15-foot centers.

Waterfowl Program

Rockefeller staff conducted waterfowl surveys in December. Surveys were standardized and designed to monitor waterfowl populations in areas with various management schemes, as well as different marsh types.

Fur and Refuge Division biologists completed the eighth year of a statewide mottled duck banding program during fiscal year 2001-02. Department personnel banded 1,024 mottled ducks this year and 16,364 form 1994 to 2001. Study parameters include: survival rates, movement, and population size. Banding has occurred on public and private property throughout Louisiana's coastal zone. New bands with the toll free phone number were issued by the Federal government are expected to greatly increase band reports from hunters. However, this

change in band reporting rates may require several additional years of banding to obtain survival information.

Rockefeller staff supervised the completion of an 85-foot grit site on the east side of the refuge. The grit site was constructed on Murphy Oil's old drill site in March of 2002.

Alligator Removal

A successful nuisance alligator removal program was conducted on Rockefeller Refuge during September 2001. Nine hunters removed their quotas of alligators (360 total) during a nine day period. Adult size (greater than six foot) alligators comprised 95.3 percent of the harvest. Within the adult segment males comprised 62.7 percent and females 35.6 percent. Average length for all alligators harvested was 7.89 feet.

Alligator trappers are required to trap furbearers on Rockefeller Refuge as a condition of their alligator trapping permit. This system works well since experienced watermen from the community that are familiar with the refuge and associated regulations harvest both furbearers and alligators. All trappers own specialized equipment that is necessary to participate in both harvest programs. Trappers removed 175 nutria, one raccoon, four otters, and one mink during the 2001-2002 fur-trapping season.

Technical Assistance, Education, and Outreach

Marsh management/marsh enhancement technical expertise was provided for private landowners in the coastal region. Rockefeller Refuge personnel worked closely with local, state, federal agencies, Ducks Unlimited, and private landowners to secure a \$1 million NAWCA grant for marsh restoration projects in southwest Louisiana which included projects on state and federal lands. State monies used to fund the \$3.1 million Rockefeller Levee refurbishment project were used as a match for federal program money. This innovative strategy that used funds already spent for a state conservation project will promote wetlands conservation throughout southwest Louisiana.

Staff assisted several landowners with renovation/management of ponds. Assistance consisted of recommendations for water levels, control of unwanted aquatic plants, and stocking densities.

Watchable Wildlife Program

Ten helicopter survey days totaling 55.4 hours were used to monitor Louisiana's nesting Bald Eagles. Two hundred thirty-eight young were produced from 178 active territories during the 2001-2002 nesting season. Peak nesting activity occurred in December/ January, and 97 percent of young birds fledged from nests by the first week of April. This is normal nesting chronology for Louisiana Bald Eagles. Twenty-nine new nesting territories were identified during the survey, while 11 nesting territories were permanently destroyed or vacated. Clear weather improved data collection and survey efficiency this year. We were able to visit all nests in south Louisiana at least twice to collect activity and production data. Cypress trees, which are the preferred nest trees in south Louisiana, shed their leaves this year which improved visibility and data collection.

Brown Pelican nesting activity began in April this year which is comparable to previous years. No winter nesting occurred on

Queen Bess Island. Eleven brown pelican colonies were active in 2001-2002 compared to 7 in 2000-2001. Fifteen thousand two hundred thirty-five (15,235) nesting pairs produced 32,255 young in 2001-2002. The average number of fledglings per nest was 2.01. Brown Pelican productivity was high during 2001-2002 since all first nest attempts were successful due to good spring/summer weather. Reproductive success remains high with 225,991 young produced from 1971 to 2002. Brown Pelican nesting was documented on the Chandealeur Islands in 1918. Nesting ceased in Louisiana in 1962. Brown Pelicans were reintroduced into the state in 1968 and began nesting in 1971. Habitat protection and fair weather during the nesting season are two important factors that will affect Louisiana's Brown Pelican population in the future.

Recreational Use

Marsh enhancement units managed by structural means have proven popular with sports fishermen, resulting in overcrowding in many places. Damage to levees and alterations of automatic features of structures that regulate water salinities and levels has been a problem. Additionally, heavy public usage has placed a strain on boat launch and parking facilities. According to data collected in 2001 - 2002, it was estimated Rockefeller Refuge experienced approximately 123,500 man-days of public use. Of this approximately 119,500 man-days were used for consumptive use, and about 4,000 were used for non-consumptive activities.

Estuarine Fisheries Program

Rockefeller Refuge continued its fisheries monitoring program in conjunction with various habitat management/restoration strategies. Though the primary goal of the division is habitat management/restoration, personnel are able to strategically allow ingress and egress of organisms into the Superior Canal complex and several other management units when habitat integrity will not be compromised.

Rockefeller Refuge continued sampling in connection with the long-term program to identify and document effects of structural marsh management on marine organisms.

Rockefeller Refuge staff continued stocking Florida-strain largemouth bass to supplement populations lost due to extreme drought conditions, as well as improve recreational fishing on the refuge. In March of 2002, staff received approximately 350,000 fry from the Booker Fowler fish hatchery to be stocked into culture ponds for grow out to fingerling size. Once they reached an appropriate size the ponds were seined, and the fingerlings were released into freshwater impounded and semi-impounded areas on and near Rockefeller Refuge. Approximately 256,000 fingerlings were released. In May of 2002, staff received an additional 350,000 fry to assist Inland Fisheries Division in meeting stocking quotas for state waterbodies. Poor production was experienced for the second stocking. Only about 45,000 fingerlings were produced and released. These fish were released in the Lake Verret area of the Atchafalaya Basin.

Research

Cooperative studies conducted at Rockefeller Refuge concerning wildlife and wetlands ecology during fiscal year 2001-02 include:

- Examining expansion patterns of *Phragmites australis* in brackish marsh on Rockefeller Refuge (LSU)
- Document and Determine causes of "Brown Marsh" on Rockefeller Refuge (LSU, NMFS)
- Ecological succession of wetland ecosystems in association with restoration and rehabilitation of coastal environments (ULL)
- Study of effects of body size and habitat on goose behavior in lessor snow and Ross's geese (LSU)

Staff member attended the Annual Conference of the Society of Wetlands Scientist in Lake Placid, NY to present the results of the research to document and determine the causes of "Brown Marsh" on Rockefeller Refuge.

Technical Assistance/Outreach/Education

Rockefeller Refuge was host to the 2001 Regional Wetlands Workshop put on by the LA Coalition to Restore Coastal Wetlands. Tours, lectures, field trips, presentations, and meals were provided for an enthusiastic group of interested participants.

Rockefeller Refuge personnel provided technical assistance to the USFWS in conducting a bald eagle research project near the Davis Pond Mississippi River diversion area.

Refuge personnel participated in the first annual Cameron Parish School Board's Career Day event at Grand Lake School.

Rockefeller Refuge personnel participated in several events to educate elementary and high school groups as well as college classes in wildlife and wetlands sciences.

Other

Work continues on two approved Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) projects. Field evaluation, data collection, design, and engineering continued during fiscal year 2001-02. The Highway 82 Fresh Water Introduction Project will inject fresh water into brackish marshes in the southeastern portion of the refuge, and the Gulf Shoreline Stabilization Project will reduce the 100 acres per year of Rockefeller beach loss to the Gulf of Mexico.

Rockefeller Refuge was selected by the USDA-ARS Honey Bee Breeding, Genetics, and Physiology Laboratory as an isolated mating station for honey bees three years ago. A pre study revealed the Unit 14 area did not have a population of wild honeybees. Therefore, selected queens and drones were crossed without mismating to other than intended genetic lines of honeybees. The Refuge was used in the autumn of 2000 to propagate a stock of honeybees with genetic resistance to parasitic tracheal mites. In the spring of 2002, the refuge was used extensively to propagate imported Russian honeybees that have genetic resistance to parasitic varroa mites.

Coastal Stewardship Program

In addition to maintaining the facilities on the Department's coastal WMAs and Refuges and assessing consumptive and non-consumptive usage of these areas, this year, the Coastal Stewardship Operations Program staff concentrated on marking and maintaining perimeter boundaries on a number of its proper-

ties using state-of-the-art "Arcview/GIS computer-generated maps. This fiscal year some 2,500 new boundary signs were installed on area properties.

Atchafalaya Delta Wildlife Management Area

Approximately 750,000 cubic yards of material dredged by the Corps of Engineers in the maintenance of the Atchafalaya River was deposited beneficially at the terminus of Gary Island, creating about 135 acres of land at elevation of 2.5 feet NGVD (i.e., approximately marsh elevation).

Drs. Bruce Thompson and Gary Peterson of LSU began to conduct a study of sport fishery use of marsh islands created via the beneficial use of dredged material with money they received from Wallop-Breaux research funding. The Department is assisting by providing lodging and transportation (when needed).

The State Land Office appealed to the Department to include "open water areas" north of the WMA adjacent to Wax Lake Outlet into the management area to discourage claims by the private sector for those properties. The Department declined the request pending concurrence and guidance from the Governor's Office. A Department-requested meeting with the Governor's Office to discuss the matter did not materialize.

At the request of Iberia Parish Sheriff Sid Hebert and with the support of Senator Craig Romero, the Department transferred the Crewboat Atchafalaya to the Sheriff's Office. The vessel is slated for use in conducting search and rescue in the Vermilion Bay area; however, it will also be available to the Department on an as needed basis in the future.

A total of 77 houseboat mooring permits were issued at the three mooring locations at the Main and Wax Lake Outlet Deltas. In addition, over 100 tents were seen using the campgrounds on the Deltas during the opening weekends of the waterfowl hunting seasons.

A survey of hunters using the Delta indicated support for continued closure of the waterfowl hunting season at 2:00 p.m. only on opening weekends, for a youth lottery deer gun hunt, and for an administrative fee to be assessed for houseboat mooring locations. This year, a total of 182 alligators were harvested, having an average length of 7.0 feet, and fur trapping on the Delta yielded some 864 nutria, 3 mink, 41 raccoons, and 3 otter.

Archery season for deer ran from November 1st through December 31st. Based on "self-clearing permit data", some 1,187 hunter efforts were expended in the harvest of 73 deer (52 bucks and 21 does), yielding a kill per effort of 1 deer per 16 efforts. Two of the bucks were 10-pointers. Although reporting via the self-clearing permit process was up this year compared to last, it was still considerably lower than when we manned the facility on a 24-hour basis.

Hunters on the Big Island reported seeing a black bear on one of the rights-of-way. In fact, one bear was reported to have torn into a hunter's knapsack on the ground to access the food inside. Staff also reported seeing a black bear on the restricted area of the Headquarters Island.

During the teal season, some 1,500-hunter efforts harvested 1,900 birds, for an average kill of 1.3 birds per effort. During the regular waterfowl season, some 13,200 ducks were harvested by 4,400 hunter efforts, for an average kill of 3.0 birds per effort.

Biloxi Wildlife Management Area

Biloxi Marsh Lands Corporation General Counsel Charlton (Chink) Ogden met with Department personnel and requested that the Department cease leasing water bottoms within the perimeter of the WMA for oyster propagation and that it consider removal or rehabilitation of the +/- 25 wooden structures within the WMA which have become debilitated.

The department agreed to strongly consider ceasing to issue new or renewed oyster leases and to begin removing dilapidated water control structures.

Mr. Mike Mayeaux of Jack Stelly and Associates in Lafayette prepared an updated boundary map of Biloxi Corporation holdings in the area of the WMA and provided copies to the department for its use in re-posting the perimeter boundary of the area.

Some 102 alligators were harvested from the area by the land manager; the Department received no proceeds from the income derived from the sale of the hides.

Isles Dernieres Barrier Islands Refuge

A "Letter of Permission" was renewed to Dr. Gary LaFleur of Nichols University in Thibodaux allowing him to periodically access the barrier islands to conduct research and reconnaissances with his students.

FEMA tentatively agreed to pay up to \$400,000.00 for Tropical Storm Allison damages to Whiskey Island, which had recently been refurbished using CWPPRA monies. Department and LDNR personnel worked closely together in an attempt to develop a reasonable restoration project that could be implemented with this money but, in the final analysis, no project was ever implemented because none could be identified for the little money available.

Lake Boeuf Wildlife Management Area

A Memorandum of Agreement was developed between the Department and adjacent landowner, the Libby Bloan Estate, establishing the WMA boundary along the Sam Foret Canal.

A field reconnaissance conducted to evaluate whether the area would be able to support a youth lottery deer hunt indicated that the area could probably accommodate as many as 8 or 10 stands.

Staff then initiated discussions with the adjacent private landowner, Mr. Dan Duplantis, to develop a right-of-way agreement to allow the Department to access the area to transport youth hunters to deer hunt.

All 10 alligator tags issued for the area were filled; the average length of the gators was 7.3 feet.

Marsh Island Refuge

Bayland Industries of Broussard completed construction of limestone riprap dikes on the east and west sides of the entrance to

Bird Island bayou using Capital Outlay Funding.

The Lake Sands Project sponsored by the Corps of Engineers via the CWPPRA Program was completed in December 2002. The project involved a 4,900-foot-long Lake Sand closure and 8 canal closures. The quality of the work was outstanding.

The maintenance crew installed approximately 180 linear feet of limestone along the Lake Tom shoreline, completing about 60 percent of the job.

Drs. Andy Nyman and Megan Lepayre continued to collect data for their ongoing study of the use of submerged aquatic vegetation by fishery organisms. The Department assisted by providing logistical support for the study.

Ms. Susan Mopper and students from ULL of Lafayette continued conducting research on Louisiana wild irises. The Department assisted by providing logistical support.

Damage to emergent marsh by foraging muskrats was estimated at 3,800 acres, mostly occurring on the western half of the Refuge. Recent muskrat damage to vegetation on the Refuge began to be observed in the spring of 2000.

Controlled burning of nearly 3,700 acres of the Island was conducted to encourage the growth of succulent vegetation, especially three-cornered grass (*Scirpus robustus/olneyi*), which is critical forage to the thousands of geese, which use the area each winter. Some 15,000 to 20,000 blue and snow geese were observed feeding on re-greening burned areas.

The two shorebird-nesting islands in Bayou Platte were mowed and sprayed to prepare them for nesting. Some 1,400 Gull-billed Terns and Black Skimmers, 50 Least Terns, and 40 Black-necked Stilts were observed nesting on the islands. Nesting was generally successful, except for the Least Terns, which abandoned the area because of high water.

No alligators were harvested from the refuge this year.

Two new 50 Kw Generac generators were acquired and installed at a cost of \$20,000.00. The estimated cost saving in fuel consumption of the new generators, compared to the old units, is expected to be sufficient to pay for the cost of the new generators within one year.

Pass-a-Loutre Wildlife Management Area

On November 29, 2001, an oil-transport tanker, The Westchester, lost power and ran aground in the Mississippi River above Venice. As mitigation for the oil spill that was created, the company agreed to create a crevasse off of South Pass and to build a boat dock adjacent to the tent camping area at the reservoir for use by recreationists using the WMA.

With the assistance of Department personnel, LDNR selected some 8 locations to be evaluated for construction of new crevasses, including the possibility of constructing a crevasse into the northern half of the reservoir units, or the clean-out of existing crevasses. This work is slated to be implemented with CWPPRA money.

Department staff met with Messrs. Don and Mark Delesdernier to discuss small discrepancies in the interface of their property boundary with the WMA. It was decided that the so-called "Jack Stelly Survey Line" would constitute the official boundary line, and area staff installed new boundary signs along that interface.

Two (2) new engines were again installed in the Crewboat Canvasback and the vessel is back in service.

Field personnel continue to assist the U.S. Fish and Wildlife Service in servicing and "down-loading" an air quality monitoring station, which was placed on the Headquarters Island. The Service pays the Department \$5,000 a year for its assistance.

Dr. Frank Jordan of Loyola University in New Orleans continued to study fish and invertebrate inhabitants of marsh habitats on the area and to evaluate how these populations respond to the creation of crevasses. So far, some 21 species of fishes and 13 species of invertebrates have been collected.

Enervest Resources, an oil and gas operator on the area, attempted to assist the Department by closing breaches in the reservoir levee embankment; however, the levee continued to breach. Accordingly, a decision was made to abandon efforts to maintain the reservoir for bass and, instead, to allow the area to be used to create a crevasse or for the beneficial use of dredged material.

This year some 75 tent camping permits and eight houseboat mooring permits were issued during the hunting seasons. Subsequently, a decision was made to create a specifically located number of tent camping sites and houseboat mooring sites before the next hunting season. Further, houseboat owners seeking mooring permits would be required to contact the Plaquemines Parish Health Unit to get their vessels' sewerage system approved before we would issue a mooring permit from the Department. So far, four tent-camping sites have been developed and three houseboat-mooring sites have been identified.

The Enforcement Division has selected the area as a training site for young enforcement cadets to learn to conduct enforcement activities and to learn waterfowl identification. Accordingly, enforcement personnel have begun to use the facilities with more frequency.

A total of 384 alligators, having an average length of 6.7 feet, were harvested from the Area.

During archery season, 278 hunter efforts were expended in the harvest of 21 deer (14 bucks and 7 does). The kill per effort was one per 13 efforts.

During the teal season, some 1,250-hunter efforts harvested 4,050 birds, for an average kill of 3.2 birds per effort. This harvest rate was generally higher than most other coastal wildlife management areas. During the regular waterfowl season, some 17,600 ducks were harvested by 5,750 hunter efforts, for an average of 3.1 birds per hunter effort. This Area had the highest waterfowl harvest and the best kill per effort when compared to other coastal wildlife management areas.

Pointe-aux-Chenes Wildlife Management Area

In the spring of 2001, Tropical Storm Allison pushed water through and over the Montegut Levee in numerous places, resulting in high levels of high salinity water in the Unit. On May 15, 2001 significant vegetation die-off within the Unit was first reported; predominant vegetation killed was *Baccharis halimifolia* and *Spartina patens*. Soil samples collected by Greg Linscombe and Dr. Irv Mendleson of LSU were tested for the presence of hydrogen sulfide to determine if that was the cause of the marsh dieoff. Findings of the test were totally inconclusive. Follow-up field reconnaissances in the area indicated that marshes, which had experienced dieoff, were recuperating.

A "land to water ratio" study of the Montegut Unit completed for the Louisiana Department of Natural Resources by the University of New Orleans indicated that a considerable increase in land had been experienced in the northern half of the Montegut Unit, probably as a result of the water management program over the last 10 years, as well as the recent three-year drought in the state. Elevation surveys by Gulf South Engineers of Houma (conducted for the LA Dept. of Natural Resources) conducted within the Montegut Unit confirmed that average marsh elevation was +3 inches NGVD. This is significantly lower than marsh elevation in past years and probably resulted from subsidence within the unit.

A number of meetings and exchanges of correspondence transpired this year regarding the desire of several local fire districts in the Montegut area to acquire approximately 3 acres of Point farm property adjacent to the Montegut School to use to establish a fire training facility. In exchange, they offered to donate to the Department one or more parcels of wetlands contiguous with and adjacent to the WMA. The Department indicated that it was willing to trade properties to assist the fire districts; however, it reiterated the requirement that the property to be accepted by the Department must, according to State law, "be of equal value." We later learned that the local fire departments abandoned the idea of using the Point Farm acreage, so the matter has been dropped.

The department, with the assistance of legislation from Senator Reggie Dupre, is in the process of preparing a lease for approximately 10 acres of Terrebonne Parish School Board property adjacent to LA Hwy 665 to establish a public tent-camping area. The remainder of the School Board property (+/- 630 acres) is already under a 99-year lease to the Department and is incorporated into the WMA.

The department interacted with The Conservation Fund in a proposal to purchase a 646-acre tract of bottomland hardwoods, locally referred to as the Ellender Tract, adjacent to and north of the Montegut Unit. The area was appraised for \$362,000 (i.e., \$560 per acre). The tract was auctioned off at a Sheriff's sale on July 26, 2002. Shortly before the auction date, abstractors for the Conservation Fund convinced the Department that a number of contested, unresolved multiple ownerships made the tract unattractive for purchase; therefore, the Department decided not to place a bid at the Sheriff's sale. The tract was sold at auction to Mr. Robert Neil who already controlled a 50 percent ownership of the tract. Mr. Neil has begun to clear-cut the

property for sale of the timber and to develop lots along LA Hwy 665.

The department met with Mr. Thomas Naquin in an effort to acquire about 5 acres that he owned adjacent to the WMA along LA Hwy 665 with the intent of developing the property into a parking lot with boat launches into the Grand Bayou Unit and into Bayou Pointe-aux-Chenes. Approximately \$500,000 of Coastal Impact Assistance Program money has been allocated for the project. Mr. Naquin indicated that he would only be willing to sell the tract at \$180,000 (greatly in excess of appraised value), so the Department abandoned efforts to purchase the property and began to evaluate locations for these developments on Pointe-aux-Chenes Bayou acreage that it already owns.

The Department of Natural Resources allocated some \$400,000 to upgrade the Montegut levee that had been seriously damaged by Tropical Storm Allison. Some 15,000 linear feet of the total 18,000 linear feet of levee was re-lifted with these funds using a private contractor. In addition, the Terrebonne Levee and Conservation District and the Department developed an "Indemnity Agreement" that allowed the district to assist in refurbishing the levee with the use of departmental equipment and district operators.

The Terrebonne Levee and Conservation District also began to "ditch the Point Farm property" to assist the department in establishing needed drainage on the farm. The dirt that was removed via the ditching was used to upgrade the local government flood control levee that crosses the north edge of Point Farm.

"Weeks Marine", under contract to the U. S. Army Corps of Engineers, added another lift to the levee along the west bank of Grand Bayou. They also added new and improved rollovers onto the Grand Bayou Water Management Unit and installed pilings in front of the two water control structures to reduce/minimize vandalism to the structures.

Approximately 22,000 bald cypress one-year-old seedlings were planted (as mitigation) along the northern perimeter of the Montegut Water Management Unit by T. Baker Smith and Son from Houma. Although the seedlings were planted in a linear format along the wetland interface of the ridge along the northern perimeter of the unit, this was equivalent to 74 acres of contiguous cypress mitigation planting. The mitigation requirements obligate that 50 percent of the seedlings survive through the first growing season. If there is not 50 percent survival, re-planting will be required.

Dr. Steve Faulkner and graduate students from LSU in Baton Rouge initiated a study within the upper end of the Pointe-aux-Chenes Unit of the WMA to assess the impacts of pump-discharged floodwaters into marsh. The research is being conducted via a grant from EPA's Barataria National Estuary Program. The department assisted local representatives of Ducks Unlimited in nominating the Pointe-aux-Chenes Water Management Unit for implementation via North America Waterfowl Conservation Act dollars. At this point, it appears that the project has a good chance of being selected to receive \$1 million toward implementation.

Ten deer food plots, one at each of the 10 elevated youth deer-hunt box stands, were planted with "iron clay peas". Youth deer hunts were held of November 23-24, 2001. A total of 15 youngsters participated in the hunts; one deer was shot at, but was not hit. Self-clearing permit results indicated that 34 hunters harvested four deer (three bucks and one doe) on the WMA.

The 120-acre dove field was sprayed with a mixture of 2,4-D and Roundup applied by helicopter to attempt to reduce the growth of Johnsongrass and indigo weed. Although the herbicide application yielded an excellent kill of undesirable vegetation, planting of millet and sunflower seed was seriously delayed because of the almost daily rains in the area. Public dove hunts were held on the last three Saturdays of October and the first three Saturdays of November. A total of 58 hunters used the area, and a total of 15 birds were harvested.

During teal season, some 2,700-hunter efforts harvested 5,000 birds, for an average harvest of 1.9 birds per hunter-effort. Teal hunting in the Montegut Management Unit yielded a kill per effort of 3.0 birds, which was the highest in this WMA. During the regular waterfowl season, some 27,500 ducks were killed by 10,000 hunter efforts, yielding an average harvest of 2.8 birds per hunter effort. The Montegut Unit produced an average harvest of 4.6 ducks per hunter average, which again exceeded the overall WMA average.

Some 26 days of hunting opportunity (six days of teal and 20 days of "big duck" hunting) were made available to physically challenged waterfowl hunters via a lottery drawing; however, only 4 applications were received and only 4 of the days available during the "big duck season" were actually hunted. NO applications were received for the teal hunts. Accordingly, a decision was made not to increase the number of hunting days or blinds available until the demand increased for this type of opportunity.

A total of 220 alligators were harvested this year, with an average length of 6.9 feet.

Salvador Wildlife Management Area

Field and administrative staff met with West Jefferson Levee District Executive Director Gerald Spohrer to request immediate purchase and transfer of title to the Department of some 1,400 acres of land it plans to acquire to mitigate the wetland habitat damage from several Jefferson Parish Levee Projects. The land would be adjacent and contiguous to the Salvador WMA. Mr. Spohrer strongly supported the idea and requested the Department to draft a "Memorandum of Agreement" that would provide for this transfer of property.

The American Natural Energy Corporation has acquired the "abandoned" oil and gas field in the area of Bayou Couba and the headquarters facilities at the WMA. Field staff met with the new operators and assisted in the implementation of a cleanup plan for the facilities that was conducted at the same time that an attempt was made to bring production back on line.

Biological staff from the Rockefeller Refuge and the U.S. Fish and Wildlife Service extracted blood samples from bald eagle

chicks in nests on the area to develop "base-line blood serum" data. These data will be used to compare to eagle serum data collected in the future, after the Davis Pond Project introduces Mississippi River water into the area, to determine if "pollutants in the river water may be adversely affecting the eagles. Opening of the Davis Pond Freshwater Structure finally occurred on March 26, 2002.

Ducks Unlimited selected the WMA for one of its sample sites in its study of waterfowl food availability in coastal fresh marshes of Texas and Louisiana. Also, Dr. Jill Rooth of the National Wetlands Center collected fresh marsh vegetation samples for her laboratory study of the effects of the "global warming phenomenon" on elevated carbon dioxide levels and, hence, marsh vegetation.

This year the Department agreed to allow the use of mudboats having engines with no more than four cylinders on the area during the hunting seasons and to eliminate the need for "annual experimental" permits to operate these mudboats.

During the teal season, 830 birds were harvested by 900 hunters, for an average of 0.9 birds per hunter effort. During the regular waterfowl season, some 4,100 hunters harvested 10,500 ducks, for an average of 2.6 birds per hunter effort.

This year 47 deer (30 bucks and 17 does) were reportedly killed via 603 hunter efforts.

Only 487 of the 448 alligators tags issued were filled. The average length of the gators harvested was 6.7 feet.

State Wildlife Refuge

Engineering design plans and specifications for the Natural Resources Conservation Service's Coastal Wetlands Planning, Protection, and Restoration Act "Lake Portage Land Bridge Project" were completed. Construction is slated to begin in January 2003

Controlled burning of some 1,700 acres of marsh was conducted in December and January to encourage the growth of three-cornered grass (*Scirpus olneyi/robustus*) to provide food for overwintering blue and snow geese.

The washout at the Redfish Point weir was plugged and riprap was placed along the shoreline on either side of the weir to reduce the likelihood of a future washout.

Wisner Wildlife Management Area

Pointe-aux-Chenes and New Iberia staff completed posting of the entire perimeter boundary of the area.

The Department has formally requested that the Lafourche Parish School Board lease to it the two Section 16 holdings inside the perimeter of the WMA. The School Board indicated its willingness to allow these areas to be incorporated into the WMA, but has requested an MOA form of instrument rather than a lease. That instrument is being developed.

OFFICE OF FISHERIES

The Office of Fisheries is comprised of two divisions, Marine Fisheries and Inland Fisheries.

MARINE FISHERIES DIVISION

The Marine Fisheries Division is charged with management of the full range of Louisiana's estuarine and marine resources. Division responsibilities are categorized as Fisheries Management Programs and Habitat Protection Programs. In addition, the Marine Fisheries Division manages four public oyster seed reservations, three public oyster seed grounds and one public oyster tonging area, administers the oyster lease survey program and the seismic program. Participation in numerous local, state, regional, national and international committees, task forces and councils provides professional expertise in the development of state and federal legislation and standards governing the wise use of renewable natural resources.

INLAND FISHERIES DIVISION

The Inland Fisheries Division manages fish populations and habitats for the conservation and improvement of sport and commercial fishing primarily in freshwater areas of the state. Division responsibilities are divided into two major categories: Fisheries Management and Aquatic Habitat Management.

MARINE FISHERIES

The Marine Fisheries Division is charged with management of the full range of Louisiana's estuarine and marine resources. Division responsibilities are categorized as Fisheries Management Programs and Habitat Protection Programs. In addition, the Marine Fisheries Division manages four public oyster seed reservations, nine public oyster seed grounds and two public oyster tonging areas, administers the oyster lease survey program and the seismic program. Participation in numerous local, state, regional, national and international committees, task forces and councils provides professional expertise in the development of state and federal legislation and standards governing the wise use of renewable natural resources.

Fisheries Management Programs

Fisheries Management Programs include Shellfish Management, Mollusc Management and Finfish Management. In addition to headquarter operations, division responsibilities are conducted through seven coastal study areas and the Lyle S. St. Amant Marine Laboratory.

Shellfish Management

The Marine Fisheries Division continued its long-term trawl sampling program throughout coastal Louisiana. Fishery biologists collected approximately 986 six-foot trawl and 2,069 sixteen-foot trawl samples from both inshore and offshore waters in each of seven coastal study areas. Data from these samples were used to recommend season frameworks for both the fall and spring inshore shrimp seasons and the winter territorial sea shrimp season. Additionally, these same data were used to recommend season extensions, special shrimp seasons, and provide recruitment indices for gulf menhaden and blue crabs.

Shrimp

The shrimp fishery is Louisiana's most valuable commercial fisheries and Louisiana continues to lead the nation in shrimp landings. Louisiana shrimp landings in 2001 totaled approximately 76.7 million pounds (all species combined/heads-off weight) and accounted for \$193.5 million in dock-side sales.

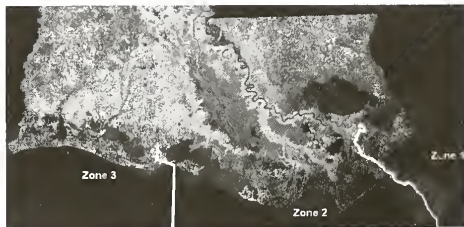
Due to significant differences in patterns of shrimp recruitment, growth and immigration among geographic areas, the Louisiana coast has been divided into three Shrimp Management Zones in order to better manage the shrimp resource. Shrimp management recommendations are listed below by zone.

Louisiana Shrimp Management Zones

- Zone 1** Mississippi state line to the eastern shore of South Pass of the Mississippi River.
- Zone 2** Eastern shore of South Pass of the Mississippi River to the western shore of Vermilion Bay and Southwest Pass at Marsh Island.
- Zone 3** Western shore of Vermilion Bay and Southwest Pass at Marsh Island to the Texas state line.

Shrimp Management Zone I

Breton and Chandeleur Sounds closed March 31, 2002



Spring Inshore Shrimp Season

- Breton and Chandeleur Sounds opened on May 16, 2002
- Remainder of Zone I opened May 27, 2002 Southern portion (south and west of the Mississippi River Gulf Outlet and south of the Gulf Intracoastal Waterway from its juncture with the MRGO to its juncture with the Industrial Canal) closed on July 2, 2002
- Northern portion (north and east of the Mississippi River Gulf Outlet and north of the Gulf Intracoastal Waterway from its juncture with the MRGO to its juncture with the Industrial Canal and including the MRGO, Gulf Intracoastal Waterway and Industrial Canal) except for Breton and Chandeleur Sounds and a portion of Mississippi Sound closed on July 15, 2002

Fall Inshore Shrimp Season

- Opened August 19, 2002
- Closed December 31, 2002

Shrimp Management Zone II

Offshore territorial waters south of the inside/outside shrimp line from the eastern shore of Freshwater Bayou to the USCG navigational light off the northwest shore of Caillou Boca at latitude 29 degrees 03 minutes 10 seconds North and longitude 90 degrees 50 minutes 27 seconds West closed February 11, 2002. Offshore territorial waters south of the inside/outside shrimp line and east of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel buoy line to the USCG navigational light off the northwest shore of Caillou Boca at latitude 29 degrees 03 minutes 10 seconds N and longitude 90 degrees 50 minutes 27 seconds W opened April 15, 2002. Offshore territorial waters south of the inside/outside shrimp line and west of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel buoy line to the eastern shore of Vermilion Bay opened on May 16, 2002.

Spring Inshore Shrimp Season

- Opened May 16, 2002
- Closed June 28, 2002

Fall Inshore Shrimp Season

- Opened August 19, 2002
- Closed December 17, 2002

Shrimp Management Zone III

Spring Inshore Shrimp Season

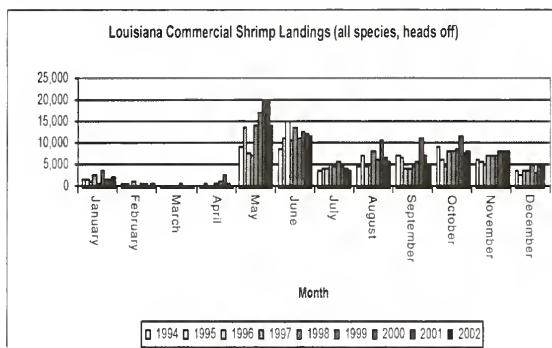
- Opened May 27, 2002
- Closed July 15, 2002

Fall Inshore Shrimp Season

- Opened August 19, 2002

Monthly landings from 1995 through November 2002 are depicted below (figure 1). Landings over the past nine years have ranged from a high of 20.5 million pounds reported in May, 2001 to 285 thousand pounds landed in March 1996. Brown shrimp production was greatest during May 2001 followed by May 2000 while white shrimp production peaked in October, 2000. Shrimp landings for 2002 are projected to total approximately 65 million pounds, a decrease of approximately 11.5 millions pounds from the previous year.

Figure 1 : Louisiana Commercial Shrimp Landings
*2002 Data subject to change.



Crabs

Louisiana blue crab landings for 2001 totaled 40.6 million pounds, which was a decline of 21.9% from the 2000 total of 52.0 million pounds. Stone crab landings for 2001 were 24.2 thousand pounds, compared to a record 49.9 thousand pounds the previous year. A major issue has been the low prices associated with increased imports of crab meat.

An assessment of the Louisiana blue crab resource was prepared for the Louisiana Department of Wildlife and Fisheries. Several reports were published by the Crab Subcommittee of the Gulf States Marine Fisheries Commission (GSMFC): the regional blue crab management plan; and, proceedings of the blue crab mortality symposium. The Derelict Trap Task Force, an ad hoc GSMFC committee, also published a report – Guidelines for Developing Derelict Trap Removal Programs in the Gulf of Mexico.

The Crab Task Force has continued to meet and address issues that confront the industry. Legislation approved during the spring 2001 legislative session granted official status to the Crab Task Force. The Crab Task has endorsed a pilot trap removal program for Louisiana.

Special Bait Dealer Permits

A total of 42 special bait dealer permits were issued to licensed wholesale/retail seafood dealers for the sale of live bait shrimp during 2002. Permitted dealers reported harvesting a total of 1,458,267 live shrimp and 159,311 live Atlantic croaker during

the permit period. Dealers also reported a total of 851 trips taken during the permit period and sales of approximately 2,770 pounds of dead shrimp. Cameron Parish dealers led all dealers in both the number of live and dead shrimp harvested followed by dealers in St. Bernard, St. Tammany, Plaquemines, Jefferson, Calcasieu, Terrebonne and Lafourche Parishes. Dealers in St. Bernard Parish led all others in the number of live croaker harvested. Assuming retail values of 20 cents for live shrimp and 25 cents for live croaker, the total dockside value of live shrimp and croaker marketed by permitted bait dealers during the permit period was approximately \$291,990 and \$39,828, respectively. Sales of dead shrimp marketed by permittees contributed an additional \$2,677 in retail sales generating a total estimated retail value of \$334,495 for the permitted live bait fishery.

Mollusc Management

The Marine Fisheries Division's Mollusc Program consists of oyster management on public seed reservations, public seed grounds, and public tonging areas. Seed grounds are designated by the Wildlife and Fisheries Commission and include a large continuous area east of the Mississippi River, as well as areas of the Vermilion/Cote Blanche/Atchafalaya Bay system. Seed reservations and tonging areas are designated by the state legislature. The department manages four seed reservations, including one east of the Mississippi River (Bay Gardene), one in the Barataria Bay system (Hackberry Bay), and two in Terrebonne Parish (Sister Lake and Bay Junop). Two public tonging areas are available to oystermen in Calcasieu Lake and Sabine Lake. Seed grounds and reservations are managed with the goal of providing seed oysters for transplant onto private oyster leases. However, a "Sacking Only Area" exists east of the Mississippi River in portions of Lake Fortuna and Lake Machias for the exclusive harvest of sack-sized oysters.

Six additional public grounds were designated in 2000, but were not open to harvest during 2001/2002 season due to incomplete stock information. These grounds include portions of Barataria Bay, Deep Lake, Lake Felicity, Lake Chien, Lake Tambour, and Lake Mechant. Oyster harvesters use mechanical dredges on public grounds and reservations, but harvest is restricted to the use of hand tongs in Calcasieu and Sabine Lake.

Management of the Louisiana oyster resource is not only important for the oyster industry, but is important for the estuarine ecosystem as well. Oysters provide a valuable economic benefit to the state, but the ecological benefits of oyster reefs are very important as well. Oysters are biomonitors of the overall health of the ecosystem and provide forage and shelter habitat for a variety of fish and invertebrates. Oysters also affect water quality through filter-feeding activities, affect estuarine current patterns, and may provide shoreline stabilization. Because oysters are both economically and ecologically important, wise management of the public oyster resource is critically important to ensure that this valuable species continues to thrive in Louisiana's coastal areas.

Statutory authority directs the Department to open the oyster season on Louisiana public seed grounds on the first Wednesday following Labor Day and close these areas by April 1 of each year. However, the Louisiana Wildlife and Fisheries

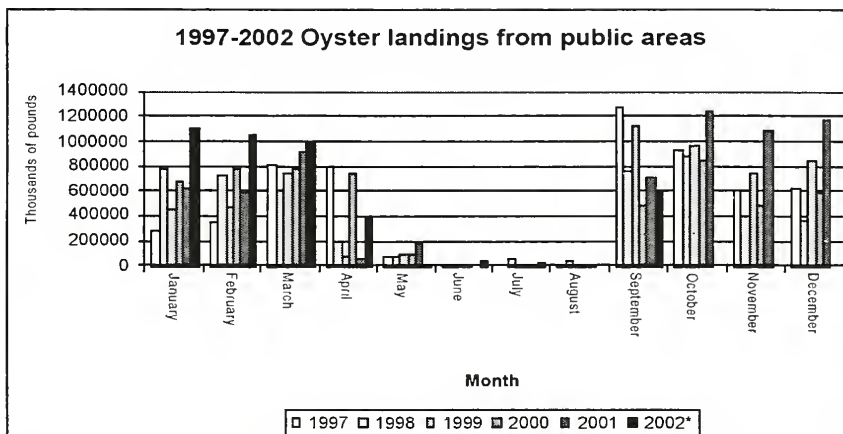
Commission is authorized to extend the season to May 15 of each year provided sufficient stocks are available. The Secretary of the Louisiana Department of Wildlife and Fisheries may close seasons on an emergency basis if oyster mortalities occur or delay the season or close areas where significant spat catch has occurred with good probability of survival or if excessive amounts of shell in seed oyster loads occur. Management practices often utilize rotational openings of the four Oyster Seed Reservations on alternating years.

Management of the public oyster grounds, reservations, and tonging areas relies heavily upon data gathered during the annual monitoring program. This monitoring program provides quantitative and qualitative data on oyster populations and other reef-associated animals. Approximately 190 square-meter samples are taken each July and over 150 dredge samples are taken in the months of March through October. Square-meter data is accomplished using SCUBA and the data is used to measure the annual oyster stock size and for yearly season recommendations by the Department. Dredge data is used to monitor the overall health of the oyster resource during the year and to assess recruitment of new age classes of oysters into the population. Field biologists also gather hydrological data on public oyster areas and develop harvest and effort estimates by conducting boarding report surveys of oyster boats.

Unequaled in oyster production over the last five years, Louisiana consistently produces one of the largest and most valuable oyster resources in the nation. Averaging over 12.5 million pounds per year, Louisiana is responsible for greater than 50 percent of the Gulf of Mexico oyster production from 1997 to 2001, and accounted for 37 percent of all oysters landed in the United States in 2001. Preliminary data from Louisiana Department of Wildlife and Fisheries' (LDWF) trip ticket program indicates that Louisiana will again eclipse the 12 million pound mark as preliminary oyster landings through September 2002 total nearly 10 million pounds. The importance of the oyster resource to Louisiana's economy is evident as commercial landings had a dockside value of nearly \$27.5 million in 2001.

Oyster landings in Louisiana are divided between harvest on public oyster areas and private oyster leases. Historically, landings from private leases comprised 60 to 80 percent of total Louisiana oyster landings. However, increased oyster availability on public grounds through successful resource management has increased harvest from public areas in recent years. In 2001, oyster landings from public areas comprised 49 percent of total Louisiana landings. Monthly landings on public areas are shown above (figure 2).

Figure 2 : 1997 to 2002 Oyster Landings From Public Areas
*2002 Data subject to change



2001/2002 Oyster Season

Harvest seasons on public oyster areas generally run from September through April, but may extend as late as May 15 of each year. The 2001/2002 season was set as follows:

- Primary Seed Grounds (south of MRGO)
September 5, 2001 to April 15, 2002
- Hackberry Bay Seed Reservation
September 5, 2001 to April 15, 2002
- Vermilion/Cote Blanche/Atchafalaya Bays
September 5, 2001 to April 15, 2002
- Primary Seed Grounds (north of MRGO)
October 1, 2001 to April 15, 2002
- Sister Lake Seed Reservation
October 1, 2001 to April 15, 2002
- Calcasieu Lake Public Tonging Area
October 15, 2001 to April 30, 2002
- Sabine Lake Public Tonging Area
November 15, 2001 to April 30, 2002

The Bay Gardene Seed Reservation opened on September 5, 2001 along with the primary seed grounds south of the Mississippi River Gulf Outlet (MRGO), but the season was extended in this reservation until May 15, 2002. The Bay Junop Oyster Seed Reservation remained closed during the 2001/2002 season.

Oyster harvest on public grounds during the 2001/2002 season was the highest in the past five seasons as landings totaled nearly eight million pounds. The majority of available oyster stocks are located east of the Mississippi River and that area of the state is responsible for the bulk of the harvest. This area is also one that provides large amounts of seed for transplant to leases. Sister Lake Seed Reservation also comprised a large part of oyster harvest in 2001/2002 as over 68,000 sacks were landed from this area (Table 1).

Area	Seed Oyster Availability (Barrels)	Sack Oyster Availability (Sacks)	Seed Oysters Harvested (Barrels)	Sack Oysters Harvested (Sacks)
Coastal Study Area I (north of MRGO)	2,872,001	4,222,228	76,000	221,800
Coastal Study Area II (south of MRGO)	1,925,709	4,642,996	159,245	844,825
Hackberry Bay	1,375	3,794	N/A	N/A
Sister Lake	304,763	687,312	18,183	68,121
Vermilion Bay	N/A	N/A	N/A	N/A
Calcasieu Lake	1,245,732	1,163,750	0	11,907

Table 1. Oyster availability and harvest in Louisiana's public oyster areas.

Oyster Leasing

At the request of the Louisiana Department of Natural Resources (LDNR), the Wildlife and Fisheries Commission adopted a moratorium on the issuance of new oyster leases on March 7, 2002, however 51 new leases were issued prior to the moratorium. The moratorium was requested in order to reduce the state's liability during coastal restoration efforts. Five new leases were issued in conjunction with the Davis Pond Relocation Program, and 300 renewal applications were processed. LDNR also requested that the annual lease auction be suspended.

The Oyster Lease Survey Section continues to maintain a website which provides information to the public about oyster leasing in Louisiana. This website contains a searchable Geographic Information System (GIS) database of current leases, landings and harvest statistics, and recent news articles about oysters. The website has had 31,443 hits since it was developed and placed on the web in March of 1998.

Finfish Management Program

The primary objective of the finfish program is to develop and maintain a database of scientific information that can be used to make rational recommendations for the management of coastal finfish stocks. The information contained in these databases is collected through fishery independent and fishery dependent sampling. The fishery dependent monitoring program of the Marine Fisheries Division collects information from fishers, processors and observers based upon methodology developed by National Marine Fisheries Service for similar programs. These programs are cooperative with NMFS or the Gulf States Marine Fisheries Commission, and definitive data sets reside in those organizations. The fishery independent monitoring program is an ongoing collection of data by biologists in the field conducting surveys designed to sample in an objective manner. Such surveys collect information based on geographic ranges independent of commercial or recreational fishing operations.

Fishery Independent Monitoring

A comprehensive monitoring program was developed in 1985 to protect or enhance these valuable resources by providing information regarding the status of fish stocks that occur in the coastal waters of Louisiana at some time during their life cycle.

Three gear types are used coast wide to sample various year classes of estuarine dependent fish.

A bag seine is used to sample young of the year and provide information on growth and movement. The seine is 50 feet in length, six feet in depth and has a six by six foot bag as an integral part of and midway the length of the net. A gill net is used to sample juvenile, subadult and adult fish and provide information on relative abundance, year class strength, movement and gonadal condition. The gill net is 750 feet in length, eight feet in depth and constructed of monofilament. The net is composed of five panels (150 feet x 8 feet) each, of the following stretched mesh sizes: two inch, 2.5 inch, three inch, 3.5 inch & four inch. A trammel net is used to provide information on relative abundance, standing crop and movement. The trammel net is 750 feet in length, six feet in depth and constructed of nylon.

Gill net samples are taken semimonthly from April through September, and monthly from October through March; trammel net samples are taken monthly from October through March, and seine samples are taken monthly from January through August, and semimonthly from September through December. Hydrological readings (conductivity, salinity, and water temperature) are taken each time a biological sample is taken. Also, wind direction and speed are taken each time a biological sample is taken. Samples are taken at specific locations arranged in such a manner so as to cover the beach, midmarsh and upper marsh areas of all major bay systems throughout coastal Louisiana. The catch and hydrological information is summarized for each coastal area on a monthly basis to give the resource managers information as to the current condition of the resource. The pertinent life history information for the important species is also used in developing analytical and predictive models. During the fiscal year of 2001/2002, 702 (99 percent) seine samples, 804 (99 percent) gill net samples, and 243 (98 percent) trammel net samples were completed for a 99 percent completion rate. Management recommendations based upon these observations are listed below.

2001/2002 Finfish Management Recommendations

July 2001

- Opening of commercial Large Coastal Shark second semi-annual season.
- Opening of commercial King Mackerel season July 1 at 12:01 am.
- Closure of spring commercial red snapper season July 6 at noon.

August 2001

- Notice of Intent, Shark rule: enforcement language, remove monthly reporting, reorganize categories.
- Notice of Intent, Tuna: enforcement language, remove bonito, minimum size limit for Bluefin Tuna.
- Notice of Intent, Billfishes: enforcement language, sail fish minimum size limit changed from 57 to 63 inches Lower Jaw Fork Length.
- Notice of Intent, Red Drum: enforcement language.

- Notice of Intent, Pompano: permitting procedure change, legislative change of "2500 ft" item.
- Closure of commercial Large Coastal Shark second semi-annual season August 31 at 11:30 pm.

September 2001

- Reopening of commercial Large Coastal Shark second semi-annual season August 31.
- Closure of commercial Large Coastal Shark second semi-annual season September 4 at 11:30 pm.

October 2001

- Closure of recreational Red Snapper season October 31 at midnight.
- Opening of fall commercial Red Snapper season for first ten days of each month.

November 2001

- Closure of fall commercial Red Snapper season

November 10 at noon.

- Closure of commercial King Mackerel season November 19 at noon.

December 2001

- Five Notices of Intent from August 2001 ratified December 20.
- Reopening of commercial Red Snapper season December 1 at noon.
- Closure of commercial Red Snapper season December 3 at noon.

January 2002

- Setting of 2002 Red Snapper recreational season.
- Setting of 2002 Red Snapper commercial season.
- Setting of 2002 King Mackerel commercial season.
- Opening of commercial Large Coastal Shark first semi-annual season January 1 at 12:01 am.

February 2002

- Presentation of 2002 bioprofile and stock assessments for Mullet, Black Drum, Flounder, and Sheepshead.
- Opening of spring commercial Red Snapper season for first ten days of each month at noon.

April 2002

- Closure of commercial Large Coastal Shark first semi-annual season April 15 at 11:30pm.
- Recreational Red Snapper Opening April 21 at 12:01 am.

Fishery Dependent Monitoring

The value of commercial landings in Louisiana exceeded 345 million dollars (graph 3) in 2001 being the second highest since 1990. The department continues to collect commercial statistics through the Trip Ticket Program implemented in 1999. Through this program, commercial landings are collected on a trip basis from wholesale/retail seafood dealers, crab sheddors and commercial fishermen holding fresh products licenses. There were over 335 thousand commercial fishing trips reported in 2001 producing nearly 1.2 billion pounds of seafood. Starting May 2000 an electronic trip ticket program was developed and made available to dealers. Roughly, 50 dealers to date have taken advantage of the computerized program and submit their trip ticket data to the department via the internet. Trip ticket information has been used to enhance the accuracy of stock assessments conducted by state and federal fishery management agencies.

Along with the collection of commercial landings, the department also conducts trip interviews of commercial fishermen. Biologist interview commercial fishermen to gather detailed information about a specific fishing trip. The federally funded program focuses on species of greatest state and federal interest.

The department, in conjunction with other states along the Gulf of Mexico and the National Marine Fisheries Service, began a new program in 2002 for the collection of biostatistical information. Biostatistical samples such as otoliths, used to determine a fish's age, are collected from both the commercial and recre-

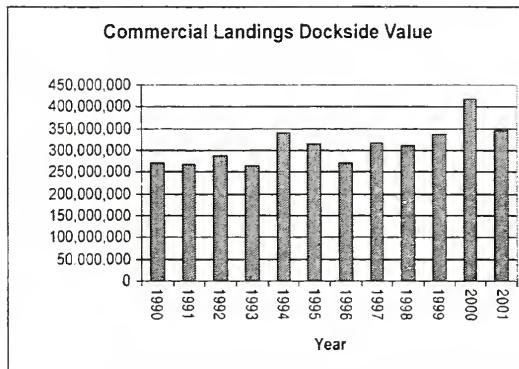


Figure 3: Commercial Landings Dockside Value

ational fishery. Otoliths are sectioned and read by department personnel to determine a fish's age much like reading the rings of a tree to determine the age of the tree. Two thousand eight hundred and forty six otoliths have been collected to date in Louisiana. The program will significantly improve the information going into stock assessments and provide more accurate results.

The recreational fishery in Louisiana is being surveyed by the department. Over 3.6 million marine recreational fishing trips were taken by more than 775,000 anglers in 2001 (figure 4). Recreational trips have been on a general rise since 1990. Nearly 12 million spotted seatrout and six million red drum were caught in Louisiana in 2001. Louisiana saltwater anglers, both resident and non-resident, spent approximately \$410 million for fishing trip, equipment, and other miscellaneous expenses. The total economic impact of marine recreational anglers to Louisiana is approximately \$746 million.

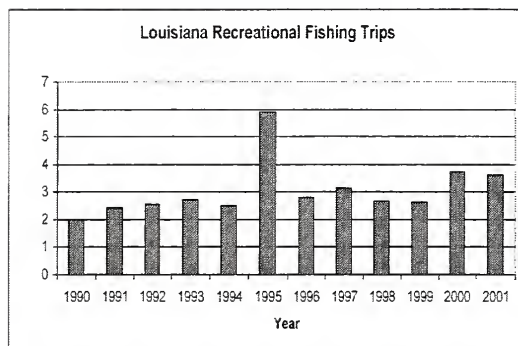
Finfish Stock Assessments

Division personnel updated stock assessments for black drum, mullet, southern flounder and sheepshead in 2001.

Mercury Sampling Project

As of May 2002, the Louisiana Department of Environmental Quality (LDEQ) requested the services of the Louisiana Department of Wildlife and Fisheries (LDWF) to conduct sampling for mercury in marine fish from the Gulf of Mexico. This was necessary due to the absence of data on mercury in marine fishes and acknowledging the significant harvest of marine fishes for consumption by recreational and commercial fishermen of

Figure 4: Louisiana Recreational Fishing Trips



Louisiana, LDEQ recognizes the value of collecting this data for the purpose of assessing potential impact that mercury levels in marine fishes have on the health of the citizens of Louisiana and the United States.

The LDWF shall provide three samples of each of the following fish from each of three coastal zones for a total of sixtythree (63) samples: Dolphin (fish), Tuna (yellow, blue, or blackfin), Greater Amberjack, Red Snapper, Cobia, Grouper (any species), and King Mackerel. The three coastal zones are: 1West (National Marine Fisheries Service (NMFS) Gulf offshore zones 16 and 17), 2Central (NMFS Gulf offshore zones 14 and 15), and 3East (NMFS Gulf offshore zones 11 and 12).

Louisiana Artificial Reef Program

The Louisiana Artificial Reef Program (LARP) was founded in 1986 through the cooperative efforts of the Louisiana State University (LSU) Coastal Fisheries Institute (CFI) and the Louisiana Department of Wildlife and Fisheries (LDWF). Resultant legislation called for the development of a State Artificial Reef Plan (Plan) and provided for an Artificial Reef Program in Louisiana (Program). Act 100 of the 1986 Legislature established that LDWF would operate the Program with logistical support from LSU. CFI and LDWF produced a Plan in the fall of 1986 that was accepted by the Louisiana Legislature. The Plan outlined the siting, permitting, and monitoring requirements of the Program.

Eight obsolete oil platforms were installed as artificial reefs during the year 2002 (January-December). LARP was established to use select, obsolete oil and gas platforms to provide habitat for a multitude of Louisiana's coastal fishes. Federal law and international treaty require oil exploration companies to remove these platforms one year after production ceases. LARP has provided an opportunity for oil companies to contribute to maintenance of fisheries habitat.

Since its inception, a total of thirty-nine petroleum and other companies have participated in the offshore program and donated the jackets of 106 oil and gas platforms, 40 Armored Personnel Carriers (APC's), and one offshore tug structure which were installed at select locations as artificial reefs. In addition the reef program also developed ten inshore reefs, primarily low profile reefs composed of shell and limestone. The Louisiana

Department of Wildlife and Fisheries constructed eight reefs and two others were associated with public conservation groups.

Lyle S. St. Amant Marine Laboratory

The Marine Laboratory's primary mission is to conduct the research required to manage Louisiana's marine fisheries. Laboratory facilities are also made available for the use of other Department and nondepartment entities engaged in fisheries management and enforcement, coastal restoration, and marine education. The Laboratory is also the headquarters of Coastal Study Area III which is charged with the monitoring of finfish and shellfish in the Barataria Bay estuarine system. The Enforcement Division routinely uses the laboratory as a base of operations, and part of the marine training of Enforcement cadets is conducted at the laboratory each spring. Several LSU, UL Lafayette, and Nicholls State University researchers make use of laboratory facilities. The Department's Education Section of Fur and Refuge conducts a teacher workshop (Wetshop) at the laboratory each summer, and in conjunction with LSU Sea Grant and Agricultural Extension also conducts the award winning Marsh Maneuvers for 4H students each summer. This fiscal year the laboratory again hosted a session of the education section's "Becoming an Outdoors Woman" (Marine Fishing). The marine laboratory also supports the monitoring of the Grand Isle Sulphur Mine Reef for the Louisiana Artificial Reef Program. The major research project on marine finfish conducted at the laboratory during the 20012002 fiscal year was the generation of age, growth, and fecundity data needed for agestructured stock assessments of black drum, gray snapper, red drum, sheepshead, southern flounder, spotted seatrout, and striped mullet. Federal funding for this project was provided through a USFWS Sport Fish Restoration grant.

Age and Growth Laboratory

To increase accuracy of stock assessments, the Division has instituted an extensive, longterm project for obtaining age, growth, and fecundity data on important marine finfish. Age and growth analyses continued during the fiscal year on black drum, sheepshead, southern flounder, spotted seatrout, red drum, striped mullet, and gray snapper. Personnel obtained fish measurements and otoliths (ear bones) by fishery independent sampling and by sampling the commercial and recreational fisheries. Otoliths were removed from the fishes, sectioned, and examined for annular rings (indicators of age). The latest computer image-analysis technology is used in otolith interpretation. As a result of having several years of commercial trip ticket data, and collecting recreational fishery statistics data, on May 2002 the department was able to begin a program to representatively sample fishery dependent otoliths in 2002. The program uses trip ticket data and recreational survey data to weight sampling sites for the collection of otoliths for the species of interest. It is expected that this method of otolith sampling will improve stock assessments by providing more accurate annual catch at age data. Cooperation continued with Louisiana State University's Coastal Fisheries Institute (LSUCFI). The Institute continued to provide consultation, and verification of the accuracy of the Laboratory's aging techniques. Institute researchers also investigated new techniques in otolith science and taught those techniques to Laboratory personnel. During the 20012002 fiscal year the age analysis was completed on 480 black drum, 158 gray

snapper, 1,010 red drum, 240 sheepshead, 192 southern flounder, 1,062 spotted seatrout, and 144 striped mullet. Gonads of 81 gray snapper from fishery dependent sampling were collected; all were sent to LSUCFI for analysis.

Habitat Protection Programs

Habitat Protection Programs include: the Southeast Area Monitoring and Assessment Program (SEAMAP), Hydrographic Monitoring, Monitoring for Environmental Perturbations, Oil Spills and Hazardous Materials, Caernarvon Freshwater Diversion Monitoring, Seismic, and Coastal Wetlands Protection.

Southeast Area Monitoring and Assessment Program

The Southeast Area Monitoring and Assessment Program (SEAMAP) is a cooperative state/federal/university program for the collecting, managing and disseminating fishery-independent biological and environmental data and information in the southeastern United States. Fishery-independent data are those collected by fisheries scientists who catch the fish themselves, rather than depending on fishermen and seafood dealers. This is in contrast to fishery-dependent data collected on a fish or fishery from sport fishermen, commercial fishermen, and seafood dealers. Both types of data are needed by fisheries scientists to understand how fish stocks respond to fishing and fishery management. SEAMAP was created to provide data from a large geographical area because conditions of a fishery in Florida or Texas waters may have an influence on fishing in Louisiana. SEAMAP collects data on fish stocks that are managed jointly by the states and federal government.

The overall program consists of three operational components: SEAMAP-Gulf of Mexico began in 1981; SEAMAP-South Atlantic was implemented in 1983; and SEAMAP-Caribbean was added to the program in 1988. Together, the three components are responsible for fishery-independent data collections from North Carolina to Florida, throughout the US territories in the Caribbean, and from Florida to the Mexican Border. SEAMAP activities in the Gulf of Mexico are determined by the SEAMAP-Gulf Subcommittee, and are coordinated through the Gulf States Marine Fisheries Commission (GSMFC). The Subcommittee has members from the states of Florida, Alabama, Mississippi, Louisiana and Texas, as well as from the National Marine Fisheries Service (NMFS) and Gulf of Mexico Fishery Management Council (GMFMC). SEAMAP conducts a variety of data collection activities; these resource surveys include a Fall Shrimp/Groundfish Survey, Spring Plankton Survey, Reef Fish Survey, Summer Shrimp/Groundfish Survey, Fall Plankton Survey and other plankton and environmental surveys. SEAMAP data are available by request, as are the various publications of the SEAMAP program including environmental and biological atlases of the Gulf of Mexico for each year from 1983 through the present.

The SEAMAP study area includes the states' territorial sea and the U.S. Exclusive Economic Zone. The individual states sample in their nearshore waters while NMFS collects samples from deeper Gulf waters. Off Louisiana, the department collects samples between Southwest Pass of the Mississippi River and Pointe au Fer, and out to the 120-foot depth contour. Louisiana

SEAMAP activities include summer, autumn, and winter trawl surveys that also collect zooplankton and environmental resource data. The department charters the offshore research vessels, R/V Pelican of the Louisiana Universities Marine Consortium (LUMCON) and the R/V Tommy Munro of the Gulf Coast Research Lab (GCRL), as platforms to collect the samples.

Environmental data are collected at all stations: water temperature and conductivity to calculate salinity, dissolved oxygen and chlorophyll concentration, and water transparency, as well as air temperature, wind speed and direction, wave height, and cloud cover. A sediment core is collected at each trawl location to identify the characteristics of the waterbottoms where the biological samples will be collected.

Biological samples are collected using two types of gear. A SEAMAP-standard 40-ft trawl is used to collect shrimp and groundfish (species or groups of fish that live most of their life on or near the sea bottom). The trawl samples juvenile and adult animals, and is used at 12 stations in water depths of five to 19 fathoms (30 to 114 ft). Each trawl station is sampled once during daylight hours and once at night to measure the different animal communities that are present in a daily cycle. Trawl station locations are selected randomly but are stratified by water depth, and a different set of stations is sampled on each cruise. All animals collected at a station are sorted and identified to species, individual lengths are measured, and the weight of each species is recorded. Plankton nets are used to sample early life history stages (eggs and larvae) of marine animals, and these samples are collected from stations set on a grid pattern (30 minutes of latitude and longitude). There are seven plankton stations in the department's study area. A 60cm bongo net is used to collect plankton from the entire depth of the water column, and a 1x2meter neuston net collects larger plankton that live at the sea surface. Plankton samples are preserved in the field and analyzed in the laboratory after the research vessel returns to port.

The summer 2002 survey was conducted July 9-12 aboard the chartered vessel Pelican. All 12 scheduled daytime and nighttime demersal trawl stations and seven plankton stations were sampled successfully. The SEAMAP study area off the Louisiana coast is in the area of the Gulf of Mexico where dissolved oxygen levels at or near the bottom become depleted during summer months. This condition is known as hypoxia and is defined as having oxygen levels of less than two parts per million. The hypoxic area has been found to affect up to several thousand square miles of fish habitat between the Mississippi River and the Texas coast. Data collected by the SEAMAP project can be used to help measure the duration and extent of hypoxia and to understand the impact it has on coastal fishes and habitat.

The fall 2002 survey was conducted September 16-19 aboard the chartered vessel Pelican. All 12 scheduled daytime and nighttime demersal trawl stations and seven plankton stations were sampled successfully.

The winter 2002 survey was scheduled for December 2-6 aboard the chartered vessel Tommy Munro, and was aborted on

December 5 because of bad weather and rough seas. Six of 12 scheduled daytime-nighttime trawl stations and three of seven scheduled plankton stations were sampled successfully.

SEAMAP data are used in conjunction with state fishery-independent and dependent data collection programs to manage Gulf of Mexico fisheries. Examples include: abundance and size distribution of shrimp to set fishing seasons; distribution and abundance of shrimp/groundfish in relation to environmental conditions; population age structure data from otolith collections and juvenile abundance indices for stock assessments. Data from all sample cruises, including real-time shrimp and red snapper data from the summer and fall cruises, respectively, were entered, verified, and uploaded to the SEAMAP data management system.

Plankton

LDWF biologists participated in a meeting of the SEAMAP Plankton Work Group in Pascagoula, Miss. on March 18, 2002 to discuss plankton sample collection procedures and field data transcription, with emphasis on the updated plankton sampling section of the SEAMAP Field Manual.

More information about SEAMAP is available at the Gulf States Marine Fisheries Commission website: www.gsmfc.org

Hydrographic Monitoring

The Department began collecting constant records of salinity, water temperature, and tide level in 1958. This program continued to be conducted in 2002, cooperatively between the Department of Wildlife and Fisheries and the U.S. Geological Survey. Data are collected from 16 stations located from the Pearl River to Calcasieu Pass; details are shown below (table 2).

Once processed, the data are used to support fishery management by, for example, determining how much suitable area of brown shrimp nursery grounds are available each year and setting season opening dates. Field data are collected by USGS, and finished data are provided to the Department. All sites collect data in near real-time (4 hour lag), and the data are transmitted via satellite from the instrument in the field to the USGS office in Baton Rouge and downloaded to the Department's database via the Internet. Both internal and external data requests are filled from this database. Data from these monitoring stations can be viewed by visiting the Department's website: www.wlf.state.la.us

Table 2: Data collection stations

Monitoring the Effects of Environmental Perturbations

As it approaches its last year, this project, funded under a grant from the National Oceanic and Atmospheric Administration, has met most of its objectives. One objective was to establish a fisheries dependent monitoring program capable of determining the impacts of adverse environmental and/or climatological conditions on the fishing patterns and subsequent income of commercial fishers and charter boats. Hurricanes, red tides, floods, oil spills, and hypoxic (oxygen-depleted) bottom waters are examples of the perturbations that affect the harvest of Louisiana's marine fishery resources and therefore, because of the importance of this industry, the economy of the state. Individual harvesters may be forced to spend additional time

LDWF#	USGS#	STATION NAME
105	0738023365	Bayou Rigolets near Slidell
106	3003010890628	Chandeleur Sound at Door Point
112	07374526	Black Bay near Snake Island, Point-a-la-Hache, LA
117	3007220891501	Mississippi Sound at Grand Pass
315	073802515	Barataria Pass East of Grand Isle
317	07380251	Barataria Bay North of Grand Isle
320	07380335	Little Lake near Cutoff
321	07380340	Tennessee Canal near Cutoff
338	073802512	Hackberry Bay NW of Grand Isle
417	073813498	Caillou Bay SW of Cocodrie
518	07381349	Caillou (Sister) Lake SW of Dulac
622	07387040	Vermilion Bay near Cypremont Pt.
623	07387050	Vermilion Bay at Bayou Fearman
730	08017095	North Calcasieu Lake near Hackberry
731	08017118	Calcasieu River near Cameron
732	08017044	Calcasieu River at the I-10 Bridge

and effort in locating targeted species, prevented from working traditional fishing grounds, or prevented from fishing at all. The determination of the effects that such events on commercial fishing allows integration of these events into the existing management regime, and form the basis for rational declarations of emergency.

Key components of the project included trip tickets, logbooks, and environmental monitoring. Wholesale/retail dealers use a trip ticket form to document purchases from commercial harvesters. In 2002 the objective of establishing the fisheries dependent program has been met and the maintenance of the trip ticket activity moved under another federal grant. The logbook portion of the project ended in December of 2001. The information in the logbooks was compiled in a data set during 2002 and it in the process of being analyzed by departmental economists and biologists for patterns and trends between environmental/climatological conditions and fishing patterns.

The environmental monitoring component of the project consisted of sampling a grid off the coast, especially in the area affected by the offshore hypoxic zone in the vicinity of Jefferson, Lafourche and Terrebonne Parishes (see figure 5). The spatial and temporal data collected during this sampling, and associated with these perturbations, continued to be documented in 2002. Maps of the most recent hypoxia surveys can be found at the Department's website at www.wlf.state.la.us

The hypoxic zone, during the summer of 2002 posted the largest areal extent, since 1985 when it was first measured, about 22,000 square kilometers. Members of this department continue to participate in various national and state level task force meetings on the subject of Hypoxia in the Gulf of Mexico.

National Coastal Assessment (Coastal 2000)

The department participated in an EPA program of National Coastal Assessment (formerly known as the Coastal 2000 pro-

gram). This fiscal year covered the second sampling season of the five year assessment. Departmental personnel sampled 50 randomly generated sites in coastal Louisiana for water quality, fish tissue and sediment samples. The sampling period was from July 15 to September 15, 2001 and the samples were divided



Figure 5: Commercial trawl sets (gray) and hypoxia sample stations (black) from July 2001 environmental perturbations cruise.

spatially into Coastal Study Areas, with their field biologists actually sampling.

Most samples were sent back to EPA to be analyzed in contract labs, while chlorophyll, total suspended solids and sediment grain size were analyzed in the Department coastal ecology laboratory. Those samples sent away were water column nutrients, sediment metals, hydrocarbon, toxicity and total organic carbon, and fish tissue for analysis for hydrocarbons. Data from these analyses will be used in a comparative assessment of the health of the Gulf of Mexico waters, based on the estuary inputs from all of the Gulf Coast states.

Oil Spills and Hazardous Materials

The Department's Oil Spill Task Force continued in 2002 to develop and implement plans to protect and restore the State's wildlife, fishery, and habitat resources from the adverse effects of oil spills.

Department personnel responded to a BP owned pipeline rupture in Little Lake. Shoreline habitats were oiled during the incident with State and federal agencies are working to measure the environmental impacts of the spill. Personnel also responded to a report of a spill from a leaking pipeline, belonging to Unocal Oil, in northern Lake Palourde. After spill cleanup, the department along with other state and federal agencies, and the responsible party work to restore injured habitats. Some of the spills being restored are:

- A May 1997 Texaco pipeline rupture into Lake Barre in Terrebonne Parish, Louisiana, which is in the monitoring of restoration phase on East Timbalier Island.
- A rupture in an Apache Corporation pipeline in June 1997 that was burned in July 1997. Indications were that the line had been leaking for some time, perhaps discharging as much as 2000 barrels of oil into the marsh near Freshwater Bayou.
- A September 1998 Equinox Oil Company well blowout

in Lake Grand Ecaille near Port Sulphur is still being settled with restoration options in the discussion phase.

- A November 1999 Chevron pipeline rupture near Grand Terre, which is in the monitoring of restoration phase. That restoration project consists of pathway clearing on wetlands conservation area maintained by The Nature Conservancy on Grand Isle.

The Department also participated in an interagency project initiated by the Louisiana Oil Spill Coordinator's Office to develop regional plans to restore natural resources injured in oil spills. These regional restoration plans will be presented for Public Comment in late 2002 and the regional Environmental Impact Statement associated with these plans will be submitted for review in late December of 2002 to the state trustees.

In addition the Department is participating with other state and federal agencies in planning restoration of hazardous materials sites. Two planning activities are underway: Bayou Trepagnier in St. Charles Parish, and Calcasieu River in Calcasieu Parish.

Seismic Section

The Department's Seismic Section was created in 1939 specifically to protect oysters, fish, shrimp, and other wildlife from the effects of seismic exploration. Seismic agents monitor geophysical companies on a daily basis to ensure compliance with seismic rules and regulations. During fiscal year 2001/2002, the seismic section monitored 16 projects throughout the state.

Coastal Wetlands

In 2001-2002, the Marine Fisheries Division continued to work with the state Wetlands Conservation and Restoration Task Force and the federal Coastal Wetlands Planning, Protection and Restoration Act Task Force to develop projects and strategies for slowing the rate of coastal wetlands loss in Louisiana.

Extensive fisheries resource monitoring programs continued for both the Caernarvon and Davis Pond Freshwater Diversion Projects. The Caernarvon Project has been operational for 11 years and Department personnel have monitored its effects on the fish, wildlife and vegetation populations in the basin throughout its operation. The Davis Pond Project came on line on in July 2002. Problems with flooding in the ponding area north of Lake Cataouatche and several tropical storm systems limited the amount of freshwater diverted through the structure. Marine Fisheries personnel continued to monitor the fisheries resources in the Barataria Basin including a comprehensive study of the Davis Pond project effects on recreational fishing throughout the basin. The Marine Fisheries Division provides input into the operation of both structures and also participates in the planning and development of future freshwater and sediment diversion projects.

Marine Fisheries Division personnel worked with other agencies to develop a lease relocation procedure for oyster leaseholders whose leases may be adversely impacted by coastal restoration projects.

INLAND FISHERIES

The Inland Fisheries Division manages fish populations and habitats for the conservation and improvement of sport and commercial fishing primarily in the freshwater areas of the state. Fish populations are managed through surveys, fish sampling, fisheries regulations, fish stocking and the modification of fisheries habitat. In addition, the Division is charged with the control of nuisance aquatic vegetation in public water bodies. This is accomplished through an aggressive aquatic plant control program that utilizes a variety of management options including herbicides, drawdowns and biological controls. The Division is also leading the charge with respect to invasive species. A recently passed executive order created a task force under Wildlife and Fisheries to create a management plan to deal with nuisance invasive species.

Fisheries Management

Lake Management

Fisheries managers estimate relative abundance, size, class structure, and species composition of fish population and physiochemical characteristics of the water in approximately 70 lakes and streams annually. All lakes are sampled in a similar manner so that data can be compared. Sampling techniques include:

Electrofishing samples are taken in the spring and fall to provide a measure of abundance. Only largemouth bass are collected in the spring while largemouth bass and crappie are collected in the fall. A forage sample of all species is also collected in the fall. Standard sampling time is 900 seconds per station.

Gill net samples are taken during winter primarily to determine relative abundance and length frequencies of gizzard shad, striped bass, hybrid striped bass, commercial and rough fish species. Monofilament nets with meshes from 2.5 to 4.0 inches (bar mesh) are set at dusk and gathered at sunrise. Each fish taken is identified, weighed and measured. This sampling method provides gear selectivity, species composition, and length frequency information.

Nighttime shoreline seine sampling measures reproductive success of the sunfishes including bass and bluegill. Year-class strength, species composition and prey availability are provided by this sampling effort. Samples are conducted during spring

and summer and consist of one quadrant haul at each sample site using a 25-foot by six-foot seine.

Frame nets are used to measure relative abundance and length-frequencies of crappie and other sunfish. Species composition, age and growth and length weight relationships are determined. Sampling is conducted for a minimum of 48 hours with two nets at each station.

Water quality samples are taken at all sampling stations. Water temperature, pH, dissolved oxygen concentration, conductivity, oxidation/reduction potential and water body depth are measured.



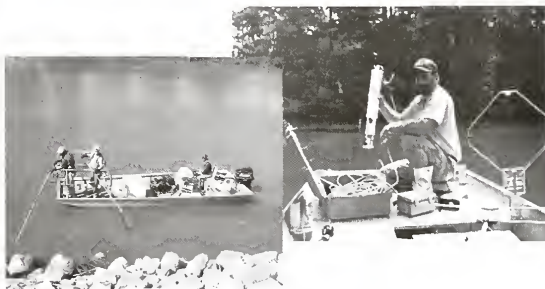
Creel samples were conducted on three water bodies. This sampling method puts the fisheries manager in direct contact with the fishermen. Information collected includes species sought and species caught, distance traveled, time fished, number caught and released, and a measurement of all fish harvested.

The Inland Fisheries Division also monitors other fish species including paddlefish, and sturgeon. The Division continues to collect data on relative abundance, habitat requirements, movements and population estimates. Paddlefish were again artificially propagated and 81,786 were stocked in Louisiana waters. All paddlefish fingerlings stocked were implanted with coded wire tags before release. Tagging, age and growth and population characteristics of pallid and shovelnose sturgeon will continue to be collected in 2003.

A project in cooperation with the U.S. Fish and Wildlife Service has begun to implant sonic tracking transmitters in Gulf sturgeon and follow their movements. Over 50 sturgeon were tagged in the upper Pearl and Bogue Chitto River systems in fiscal year 2001-02. Several of the fish were tracked to their winter holding grounds in the Pontchartrain basin and Mississippi Sound area. Technical Advice to Owners of Ponds and Small Lakes is also part of the responsibility of the division. During the past year, division biologists made over 305 site visits assisting residents of the state on problems ranging from construction and stocking requirements to harvest and disease identification. The biologists also answered over 3,500 phone inquiries about various pond related problems.

The division has initiated a Freshwater Artificial Reef Program. With many of our Louisiana impoundments losing natural complex habitat as a symptom of aging, the department is now in the process of developing guidelines for the construction of freshwater artificial reefs, with the use of various materials. The preliminary findings indicate that material and methods used do attract and provide necessary cover for all sizes of sport fish and have no negative environmental consequences.

Louisiana Cooperative Fish Disease is a project that the division has with the L.S.U. Aquatic Animal Diagnostic Lab within the



School of Veterinary Medicine, which provides support to private pond owners. Last year 280 cases were submitted as part of this project.



The division is also responsible for conducting investigations into fish kills in freshwater. Area impacted and losses are recorded for each kill. Six major fish kills and dozens of minor incidents were investigated this year. Naturally-occurring dissolved oxygen depletion was indicated as the cause of most kills, and one disease outbreak occurred. Continued investigations into the Largemouth Bass Virus problem were conducted. DWF personnel assisted in administering a grant to LSU to develop non-lethal methods for detection of this disease.

Fish Stocking

The goals and objectives of the Inland Fisheries Division include providing the public with a quality fishing experience and managing for big bass. In part the management for big bass is reliant upon the stocking or incorporating of the Florida largemouth bass gene into our native black bass environment. In 2001-2002 departmental Inland Fish Hatcheries provided fish stocking as an integral part of our fisheries management program for 68 diversified water bodies that encompass over 900,000 acres throughout the state of Louisiana.

The following is an alphabetical listing of the water bodies stocked in fiscal year 2001-02:

Amite River, Anacoco Lake, Atchafalaya Basin, Atchafalaya River, Bayou Macon Cutoff 1,2,3, Black Bayou (Bossier Parish), Black Lake (Natchitoches Parish), Blind River, Bundick Lake, Caddo Lake, Caernarvon, Caney Lake, Cheniere Brake, Chicot Lake, City Park Lake (Baton Rouge), Claiborne Lake,

Comite River Pond, Concordia Lake, Cotile Lake, Cross Lake, Cypress Lake, D'Arbonne Lake, Delta Pond, Des Allemands, Elbow Slough, False River, Grassy Lake, Henderson Lake, John K. Kelly, Kincaid Lake, Lacassine Nat'l Wildlife Refuge, Lake Arthur, Lake Bistineau, Lake Bruin, Lake Fausse Point, Lake Louie, Lake Ophelia Nat'l Wildlife Refuge, Lake Providence, Lake St. John, Lake Verret, Lamar Dixon Pond, Lower Sunk Lake, Mermentau River, Miller's Lake, Mississippi River, Muddy Bayou Impoundment, Nantachie Lake, Poverty Point Lake, Red River – Pool 1, Red River – Pool 2&3, Red River Pool 4&5, Red River(WMA)-Barrow Pit, Rockefeller Refuge, Rodemacher Lake(Cleco), Sabine Nat'l Wildlife Refuge, Spanish Lake, Spring Bayou, Sabine River Authority Pond, Tangipahoa River, Tchefuncte River, The Pen/Davis Pond, Tickfaw/Natalbany Rivers, Toledo Bend, Urania Pond, Vernon Lake and Wallace Lake.

SUMMARY OF FISH STOCKED FISCAL YEAR 01/02

Florida Largemouth Bass:	6,090,242
Striped Bass :	85,506
Hybrid Striped Bass:	202,681
Channel Catfish:	84,948
Flathead Catfish:	1,700
Paddlefish:	83,491
Black Crappie:	4,631
Bluegill:	584,994
Total:	7,138,193

Aquatic Plant Research and Control Program

During fiscal year 2001-02, the Aquatic Plant Research and Control Program provided substantial benefits to the citizens of Louisiana. Responsibilities included monitoring water bodies for non-native, invasive aquatic vegetation, providing technical assistance, and continuous investigation into more effective and environmentally safe methods of controlling these nuisance plants. Aggressive treatment of affected waters continued in an effort to restore and improve the aquatic habitat and the natural desirable balance of plants and fish. Control of nuisance plant species is also necessary to provide boating access to many public waterways.

Eleven (11) lakes were type-mapped to determine and evaluate the status of aquatic weeds, primarily submersed. Species composition and density were determined on five (5) lakes. The results from these investigations were used in formulating management plans on which decisions of water body habitat alteration are based.

Biologists continued to provide advice and technical assistance to private and municipal pond owners concerning aquatic vegetation management problems. This popular extension program also provided aquatic plant identification assistance for the public on request.

Research projects of the Aquatic Plant Research and Control Program included evaluation of new herbicides to determine their effectiveness for use in aquatic weed control. Investigations into the affects of environmental conditions and water level fluctuations on hydrilla (*Hydrilla verticillata*) and





two species of salvinia, common (*Salvinia minima*) and giant (*S. molesta*), were conducted. Additionally, research on biological control of both species of salvinia using the salvinia weevil is ongoing.

The department is funded to control, primarily, water hyacinth (*Eichhornia crassipes*). Crews utilizing boats, airboats, mud-boats and roadside spray units effectively applied herbicide to 27,227 acres of Louisiana's freshwater wetlands infested with water hyacinths. Another 7,950 acres were treated by helicopter for a total of 35,177 acres.

Other exotic, aquatic plants, such as, hydrilla and the two species of salvinia can be just as troublesome as water hyacinth. During the year, special legislative appropriations were used to purchase herbicides to conduct limited applications on specific water bodies that had particularly severe infestations of these plants. These applications were for boating access improvement and habitat enhancement, and served to familiarize local residents with the safe and effective use of aquatic herbicides.

Eleven hundred (1100) acres of hydrilla were treated on the Prairie portion of Black/Clear Lake near Natchitoches. This was part of a management plan that called for alternating lake draw down and herbicide application for a five-year period. Also, approximately 400 acres of hydrilla were controlled at Spring Bayou Wildlife Management Area and adjacent waters.

Throughout the year, 790 acres of salvinia were treated statewide. One-hundred and twenty-nine (129) of those acres were giant salvinia on Toledo Bend Reservoir and a small, persistent infestation in the Houma area. In the fall of 2000, giant salvinia was discovered in the Cameron area of southwest Louisiana. The department provided enough herbicide for Cameron Parish to make an aerial application to approximately 200 acres. This application did not eradicate the plant from this area. Recent high water conditions have spread the plant to other areas of the marsh making herbicide application difficult, if not impossible.

Public Boating and Fishing Access

In a cooperative effort, the department assists local government entities requesting financial assistance in the development and construction of boating and fishing access facilities. To accomplish this, the department obligates federal Sport Fish Restoration funds to match up to 75 percent of the total cost of these projects. This program funds both fresh and saltwater projects which may include construction of boat ramps, parking

areas, docks, bulk heading and fishing piers. A total of 62 projects are completed to date, and another 13 are in various stages of either planning or construction. An additional 5 projects are presently being considered for the 2003 funding cycle.

Public Access Facilities for Boating and Fishing under Construction or in the Planning Stage

- Intercoastals City Boat Launch and Parking
- Main Street Boat Launch
- Cheniere Lake Boat Lane Marking
- Grand Chenier Boat Launch
- Plaquemine Waterfront Floating Fishing Docks
- Berwick Boat Launch, Phase II
- D'Arbonne Lake Boat Lane Marking & Stump Removal
- North Bend Boat Launch
- Reserve Boat Launch, Phase II
- South Shore Harbor Improvements
- Fort Pike Boat Launch
- Belle Chase Boat Launch
- Mandeville Fishing Pier

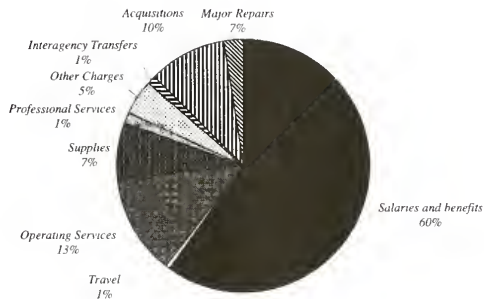
Permits

Inland Fish Division issues a variety of permits to provide individuals a legal method to participate in a specific activity. A list of these permits, a short explanation for each, and the number issued last year appear below.

- Scientific Collecting Permit – to take fish for scientific or educational purposes or for propagation or for distribution. Issued last year - 89
- Triploid Grass Carp Permit – to allow individuals to possess triploid grass carp. Issued last year - 236.
- Triploid Grass Carp Sellers Permit – to all individuals to import, transport, possess and sell triploid grass carp. Issued last year - 7
- Tilapia Permit – to allow individuals to possess tilapia. Issued last year - 13
- Experimental Seine Permit – to allow individuals to commercially fish for shad and skipjack herring while using a seine. Issued last year - 20
- Experimental Gill Net Permit – to allow individuals to commercially fish for shad and skipjack herring while using a gill net. Issued last year - 8
- Experimental Freshwater Shrimp Permit – to allow individuals to commercially fish for freshwater shrimp while using a specific net. Issued last year - 2
- Gamefish Fingerling Permit – to allow individuals to transport, possess and sell game fish fingerlings. Issued last year - 17
- Mussel Harvester's Permit – to allow individuals to commercially harvest freshwater mussels. Issued last year - 0
- Mussel Buyers Permit – to allow individuals to buy commercially harvested mussels from mussel harvesters. Issued last year - 0
- Scuba Spearfishing Permit – To allow individuals to spearfish in Toledo Bend Reservoir June through September. Issued last year - 10

APPENDIX

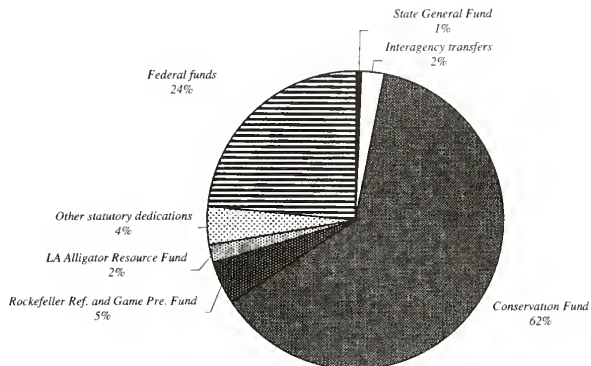
FY 2001-2002 Department Expenditures by Category (type)



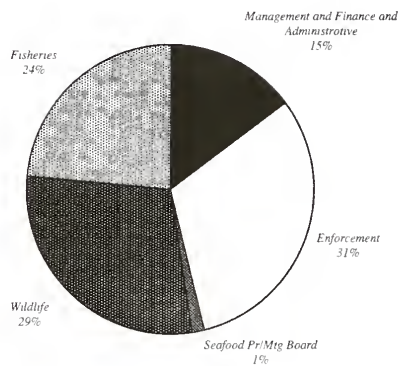
Total Expenditures \$57,440,277

Total Authorized Head Count 801

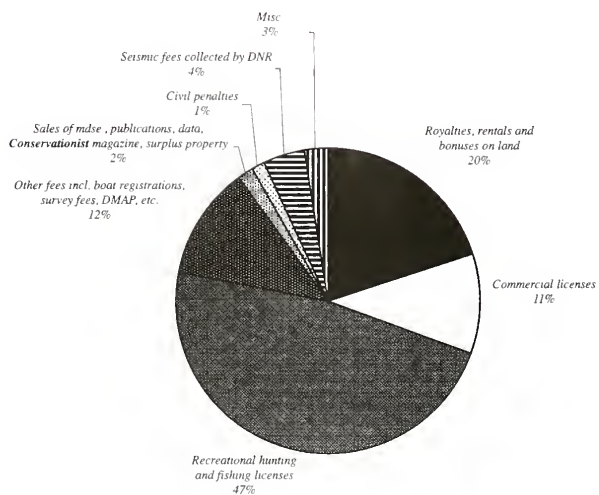
How 2001-2002 Expenditures Were Funded (Means of Financing)



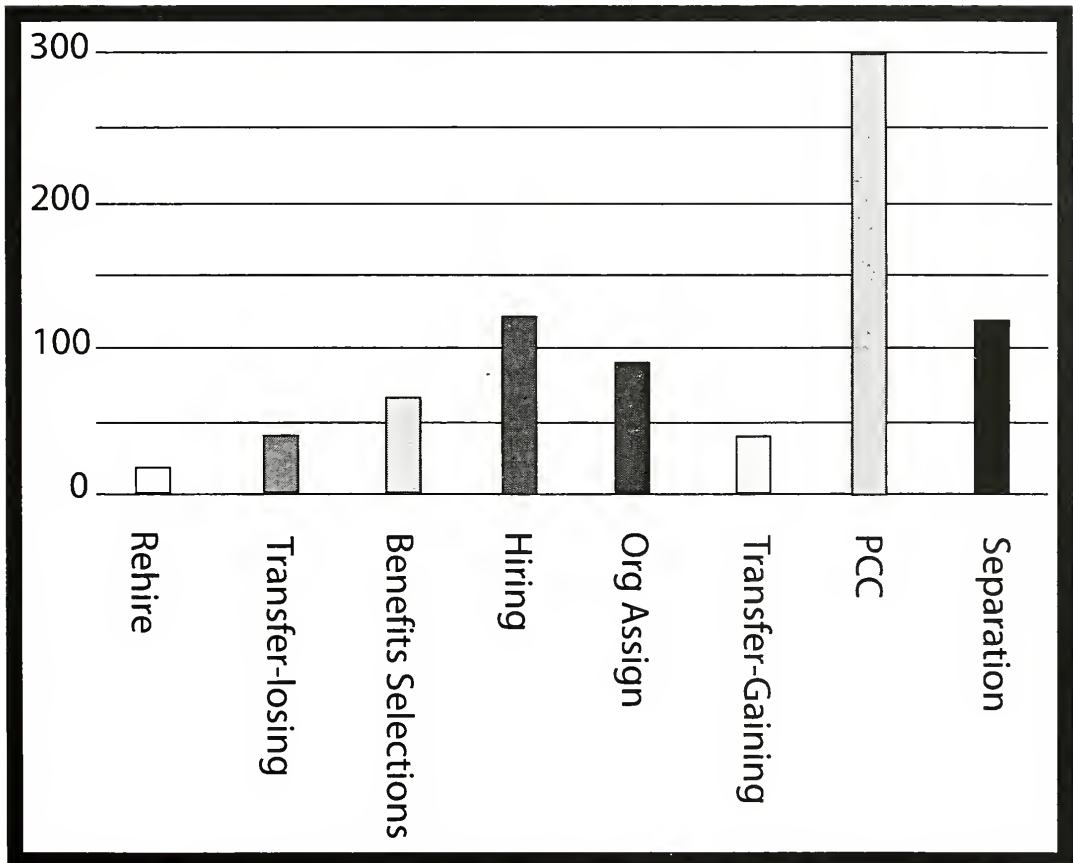
FY 2001-2002 Department Expenditure by Appropriated Program



Sources of Revenue to the Conservation Fund FY 2001-2002



BREAKDOWN OF EA ACTION



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